University of Nevada, Reno

A Quantitative Investigation of Law Enforcement Officers' Self-Reported Leadership Practices, Trust, and Personality Traits

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By

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ABSTRACT

Contemporary policing has progressed from reactive to proactive strategies and leadership has shifted from executives at the top to front line law enforcement officers. Law enforcement officers' leadership discretionary activities can make a difference in terms of community-oriented policing. Nevertheless, law enforcement officers' leadership is challenged by role ambiguity, stress factors that source from their organizational and occupational culture. The purpose of this quantitative study was to investigate the self-reported leadership practices and trust of law enforcement officers grouped according to selected demographic characteristics and personality traits in three different law enforcement departments in a City of the Western United States. Traditional univariate and multivariate statistical techniques such as Multivariate Analysis of Variance (MANOVA), Analysis of Variance (ANOVA), and Pearson's correlation coefficient were utilized. The findings indicated that there were significant statistical differences in self-reported leadership practices of ranked and unranked law enforcement officers and that the personality traits Agreeableness and Openness were both correlated and produced statistically significant differences with self-reported leadership practices and trust. In contrast, the personality trait of Extraversion was correlated with all the subscales of the Leadership Practices Inventory (LPI), but not with trust. Salient findings focused on three areas: (a) demographics and leadership practices; (b) merit-based promotion methods; (c) trust and leadership practices; and (d) personality and leadership practices. This exploratory study aimed to expand the field of the current literature on law enforcement officers and bridge the knowledge gap between self-reported leadership practices, trust and possible relationships to personality traits within law enforcement.

Dedication

The current Dissertation is dedicated to all the people in the world who strive to evolve and become better human beings by making the world around them better. To my father: *Nikolaos Kyriakou* who was an example of altruism and I know is proudly watching (*R.I.P.*), my mother Artemis-Niki Xanthopoulou Kyriakou who has been a source of wisdom and a 'keystone' to all my accomplishments, my brother Mihalis whose help has been pivotal to my success, my children Artemis-Niki and Christos who have been remarkable in this journey and a source of strength, and to Thomai who was a pillar of support in the beginning of my educational Odyssey. My good friend Ivan Birovljev who assisted me in so many ways. Also dedicated, to all my students, players, assistants and friends who helped me to disseminate knowledge and touch their hearts, and to all my opponents who without them I wouldn't be where I am, and who I am.

῾Εν οἶδα ὅτι ουδὲν οἶδα"

Socrates "Apology"

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CHAPTER ONE-INTRODUCTION

Law enforcement officers are unique because they have been granted the legitimate use of coercion by their lawful ability to threaten harm to others (Muir,1977). Law enforcement officers are also unique because they perform their profession in an environment with a potential or even the presence of danger (Cockcroft, 2013; Paoline, 2003; Skolnik, 1994: van Maanen, 1974; Sparrow, Moore, & Kennedy, 1990). Law enforcement officers face new and different challenges in the 21st century such as terrorism, cybercrime, and asymmetric forms of violence (e.g., virtual crime) (Moggré et al., 2017; Roberts, Herrington, Jones, White, & Day, 2016). Furthermore, it is evident that the law enforcement occupational culture shapes values through the hazards and stressors, which create additional challenges (Brown, 1988; Chan, 2007; Liberman et al., 2002; Padyab, Backteman-Erlanson, & Brulin, 2016). Consequently, law enforcement leaders seek forms of leadership to address the challenges. The need to reassess leadership because of the stressors and challenges within the law enforcement culture and policing seems necessary. The issue of law enforcement leadership is not limited from the hierarchy to the street officer but also within law enforcement and among the different groups (e.g., genders, ranks, units) (Paoline, 2001; Shafer, 2009; Shafer, 2010; Silvesrti, 2007).

Northouse (2019) proposed that leadership is a process whereby an individual influences others to achieve a common goal. Individual influences in leadership was acknowledged some time ago by Cowley (1931) who suggested that leadership should always be viewed through the study of personality traits since it pertains to personal influence. Specifically in law enforcement, exemplary leadership practices are imperative; however, it has been argued leading takes a completely different dimension when policing in instances that may involve the difference between life and death (Anderson et al., 2006; Haberfeld, 2006; Paoline, Myers, & Worden,

2000; Paoline, 2003). Therefore, law enforcement patrol officers' personality, as well as ability to influence at the street-level, are essential particularly because patrol officers are responsible for adhering to the role of a leader towards community members (Anderson et al., 2006; Vizant & Crothers, 1994).

According to Haberfeld (2006) both police work and leadership are about reliance on others, which involves general trust, defined as the expression of honesty, genuineness, integrity, selflessness, consistency and benevolence in human relationships, and a willingness to be vulnerable (Hall, 2009). Indeed, as noted by West-Burnham (2010), it is difficult to envision any aspect of police work and leadership practices that are not profoundly dependent on trust. Sergiovanni (2005) and Reina and Reina (2006) contended that without trust, the leader will lose credibility and fail. Specifically, interpersonal trust has been recognized a crucial element for sustaining team and organizational effectiveness (Dirks & Ferrin, 2001). Employees' trust in their leaders as well as their colleagues has been associated with productivity-related processes and outcomes (Dirks & Ferrin, 2001; Orrick, 2018).

According to Roberts and colleagues (2016), policing requires knowledge and expertise of leadership, as well as trust among colleagues, for surviving the hazards of the occupational culture of policing (Haberfeld, 2008). In addition, policing demands the ability to think innovatively and critically about issues of community relations and of public safety (Roberts et al., 2016). Innovative skills in communication and problem-solving, as well as outcomes such as discretionary effort, organizational citizenship, organizational commitment, and the rate of employee turnover, are also related to leadership and trust (Dirks & Ferrin, 2002; Orrick, 2018).

Uniqueness of Law Enforcement Organizational and Occupational Culture

The distinct work environment of police culture includes negative connotations (e.g. police officers are unnecessarily violent, corrupted). This is due to abuse of force and corruption involving police officers, which creates a climate that can influence role performance (Cockcroft, 2013; Paoline, 2003; Paoline, Myers, & Worden, 2000). The roles of law enforcement officers are affected by the complexity of the dynamics of police culture such as physical danger, a unique coercive authority, a punitive supervisory oversight, and shared values (Grant & Langan-Fox, 2006; Moggré et al., 2017; Paoline et al., 2000). Consequently, and due to its complexity, it has been difficult to define law enforcement culture. Waddington (2009) referred to it as "the mix of informal prejudices, values, attitudes and working practices commonly found among lower ranks of the police that influences the exercise of discretion. It also refers to the police's solidarity, which may tolerate corruption and resist reform" (p. 203). The complexity embedded in law enforcement culture is added to the role of law enforcement officers and produces complications in managing work-related stresses and the role itself (Grant & Langan-Fox, 2006; Moggré et al., 2017; Paoline et al., 2000).

The complex dynamics of the law enforcement culture affect law enforcement officers' professional attitudes and behaviors, which present significant challenges to their leadership practices, especially towards the community (Grant & Langan-Fox, 2006; Moggré et al., 2017; Ozer & Bent-Martinez, 2005; Silvestri 2007). This is because officers are required to work in two discrete environments simultaneously (Cockcroft, 2013; Paoline, 2003; Paoline et al., 2000; van Maanen, 1974). The first is the occupational environment which entails the relationship of the law enforcement officer to society (i.e., citizens), and the second is the organizational structure within policing (Cockcroft, 2013; Paoline, 2003; Paoline et al., 2000).

Leadership, Trust, and Personality Traits in Policing

Various studies have considered relationships among leadership and trust (Burke, Sims, Lazzara, & Salas, 2007; Gillespie, & Mann, 2004; Dirks & Ferrin, 2002), the connections among leadership and personality traits (Judge et al., 2002b; Rasor, 1995), and links among personality traits and trust (Mooradian, Renzl, & Matzler, 2006; Pillai, Williams, Lowe, & Jung, 2003). Personality traits were also researched within law enforcement (Engel, 2000; Shafer, 2010; Vanebo, Bjørkelo, & Aaserud, 2015) and specifically between law enforcement and the community (Engel & Worden, 2003; Jo & Shim, 2014). However, despite the importance of leadership in shaping law enforcement outcomes, it has been argued that effective leaders are often lacking within law enforcement organizations (Haberfeld, 2006; Rowe, 2006; Shafer, 2010); therefore, scholars have proposed that attention should be devoted to understanding leaders and leadership (Judge et al., 2002b; Paoline, 2003; Sanders, 2008).

Roles in Policing. Law enforcement officers have inherently competing obligations as they carry out their professional duties of law and order. On the one hand, they must enforce laws and have been given extraordinary power to do so. At the same time, maintaining order involves cooperation with the public, which requires trust. The main roles of law enforcement officers are to enforce laws, prevent crimes, respond to emergencies, and provide support services (Peak, 2009; USDJ, 2015). The role of law enforcement officers in a community setting include promotion of public safety and upholding the law to safeguard the liberties of citizens (Peak, 2009; USDJ, 2015). The competing obligations of law enforcement officers' roles are apparent because they possess the power to coercive authority and the legitimate use of weapons toward citizens (Muir, 1977). While given legitimate coercive authority, law enforcement officers are also required to create trusting relationships with the community based on honesty,

genuineness, integrity, and selflessness (Hall, 2009; Peak, 2009). Balancing these two obligations requires law enforcement professionals to exhibit leadership qualities. Leadership is a "process whereby an individual influences a group of individuals to achieve a common goal" (Northouse, 2019, p. 5). Specifically, for addressing leadership within the community it has been argued that personality plays a crucial role in leadership practices (Judge et al., 2002b; Rasor, 1995; Sanders, 2008) and affects trust (Mooradian, et al., 2006; Pillai, et al., 2003), particularly between law enforcment and the community (Goldsmith, 2005; Stoutland, 2001; Van Graen, 2016).

Statement of the Problem

Law enforcement leadership practices have been studied (Engel; 2000; Sanders, 2008; Shafer 2009,2010;). Trust in law enforcement has been studied (Carr & Maxwell, 2018; Goldsmith, 2005; Stoutland, 2001; Van Graen, 2016). Personality in law enforcement has been studied (Miller, 2015; Miller, Mire, & Kim 2009; Sanders, 2008). There is a dearth of study about how these three intersect. In addition, in law enforcement, leadership—in theory—has shifted from executives at the top to the front-line police officers, where effective leadership and discretionary activities can make a difference in terms of community oriented policing (Paoline, 2003; Shafer, 2010; Steinheider & Wuestewald, 2008; Wuestewald & Steinheider, 2012). For example, leadership practices of engagement, prevention, and interdiction are crucial to effective community-oriented policing (Steinheider & Wuestewald, 2008; Vanebo, Bjørkelo, & Aaserud, 2015).

Policing has been characterized as continuously evolving (Roberts et al., 2016), requiring exemplary leadership practices (Paoline, 2003) and being constantly poised to react (Shafer, 2010). Even though the need for leadership has evolved to the patrol or law enforcement officer

level, most studies have only focused on leadership of police executives and police supervisors (Cockcroft, 2014; Moggré et al., 2017; Vito & Higgins, 2010; Vito, Higgins, & Denney, 2014). Consequently, research is scarce related to unranked law enforcement officers' leadership practices, trust, and understanding of personality traits of law enforcement officers. For law enforcement, the relationship among leadership behavior, trust, and personality dimensions is not well understood

Purpose of the Study

The purpose this study was to explore relationships among self-reported leadership behaviors, trust, and personality dimensions. Additionally, this study investigated self-reported leadership practices and trust of law enforcement officers across selected demographic variables. Specifically, this study investigated relationships between self-reported leadership practices and trust of law enforcement officers across selected personality trait groupings.

Leadership in complex cultures such as law enforcement is critical for split second decision-making that separates life from death (Day, 2011; Roberts et al., 2016; Flynn and Herrington, 2015). This requires law enforcement organizations and leadership to reflect strategic foresight. Additionally, law enforcement organizations need to ensure that leaders entering the organization have high-level critical and creative thinking skills as well as practice sound leadership behaviors to address the complex problems in community policing. To assess parameters of these skills required, the Leadership Practices Inventory (LPI) was utilized to evaluate exemplary leadership practices (Kouzes & Posner, 2012; Posner, 2016). The General Trust Scale (GTS) (Yamagishi & Yamagashi, 1994) was used to assess trust. The Big Five Inventory (BFI) was used to assess the most significant aspects of personality (John, & Srivastava, 1999; McCrae & Costa, 2007; Pervin & John, 1999).

Research Questions

The primary research question for this study examined whether differences existed across groups of law enforcement officers based on self-reported leadership practices and self-reported measures of trust. The following research questions guided this research study:

1. When groups are established by selected demographic variables, are there differences in group based self-reported leadership practices and trust?
    a. Are there differences in self-reported leadership practices and trust between police and sheriff departments?
    b. Are there differences in self-reported leadership practices and trust between male and female law enforcement officers?
    c. Are there differences in self-reported leadership practices and trust between ranked and unranked law enforcement officers?
    d. Are there differences in self-reported leadership practices and trust between law enforcement officers who worked one to 10 years, and those who worked over 10 years?
    e. Are there differences in self-reported leadership practices and trust between law enforcement officers who graduated from high school and those who graduated from college?
    f. Are there differences in self-reported leadership practices and trust between law enforcement officers who did not have military training and those who had military training?

g. Are there differences in self-reported leadership practices and trust between law enforcement officers who are not married or are divorced and those who are married?

2. When groups are established by selected personality traits, are there differences in leadership practices and trust?
    a. Are there differences in self-reported leadership practices and trust when grouped by extraversion?
    b. Are there differences in self-reported leadership practices and trust when grouped by agreeableness?
    c. Are there differences in self-reported leadership practices and trust when grouped by conscientiousness?
    d. Are there differences in self-reported leadership practices and trust when grouped by neuroticism?
    e. Are there differences in self-reported leadership practices and trust when grouped by openness?

Significance of Study

Research that investigates the combination of leadership practices, trust, and personality traits on any professional domain, but specifically among the law enforcement, is limited (Adlam & Villiers, 2003; Anderson et al., 2006; Haberfeld, 2006; Walker & Katz, 2009). The current study focused on self-evaluations of law enforcement officers' leadership skills towards the community, regardless of rank in their leadership position. Specifically, the study investigated exemplary leadership practices described by Kouzes and Posner (2014), trust outlined by Yamagishi and Yamagishi (1994), and personality traits initiated by Costa and McCray (1992),

and further developed by John and Srivastava (1999). The data were assessed with the use of three survey tools; LPI, the GTS, and BFI.

The primary focus of most studies in policing have used follower-centric approaches to leadership that have typically concentrated on how followers perceive the behaviors of their leaders in contrast to how leaders perceive their own behaviors (Carsten, Uhl-Bien, West, Patera, & McGregor, 2010; Lynne-Sherrill, 2015). Alternatively, the current study focuses on how law enforcement officers perceive their own leadership practices, personality traits, and general trust. Accordingly, the current study is an effort to bridge the knowledge gaps among leadership practices, trust, and personality traits.

Leadership is influenced by many parameters such as perception, expectations, environment, and personality (Osseo-Assare, Longbottom, & Murphy, 2005; Otaka, 2011; Ozer & Benet-Martínez, 2005; Popa & Andenoro, 2005). This study aims to contribute to the understanding of set of characteristics involved in leadership—as are trust and personality traits— and provides data to assist law enforcement professionals to enhance the efficacy of a leader or potential leader in law enforcement (Shafer, 2010). Furthermore, police leadership developmental programs can strive to improve communication skills, trust in relationships, and provide the technical knowledge that is partially related to making sound decisions and performing duties in a competent manner. More challenging, however, might be enhancing integrity, caring, work ethic, fairness, and flexibility among law enforcement officers (Shafer, 2010). Finally, this research expands the field of current literature on law enforcement studies and assists in data origination for future inquiries.

Assumptions

This study will assume the following:

1. The LPI will provide a valid and reliable self-assessment of the community leadership practices of police officers.
2. The GTS will provide a valid and reliable self-assessment of trust of police officers.
3. The BFI will provide a valid and reliable self-assessment of personality traits of police officers.

It is generally assumed that survey responses will be honest and reflective of how the participants view themselves as opposed to how they believe they should be viewed. Anonymity and confidentiality of participant responses to the survey were communicated in advance of the survey distribution to insure greater honesty in responses. Finally, the background of the sample group (i.e., law enforcement officers) emphasized the expectation of honest responses.

Limitations

The use of two surveys and additional forms to collect the data may be time consuming. However, the instruments utilized in this study were valid measures of perceived leadership practices, trust and personality traits. Furthermore, this study used three self-reporting measuring instruments. The three self-reported instruments that were used are the Leadership Practices Inventory (LPI) (Kouzes & Posner, 1988), the Big Five Inventory (John & Srivastava, 1999) and General Trust Scale (GTS) (Yamagishi & Yamagishi, 1994). Self-report measures generally rely on the respondent being truthful and open in his/her responses; thus, respondents' self-reported measures are subject to bias. This tendency of egoistic or moralistic bias is a self-deceptive tendency to exaggerate one's social and intellectual status unrealistically (Paulhus & John, 1998). Paulhus and John (1998) further reported that traits with positive self-perceptions to be exaggerated were dominance, fearlessness, emotional stability, intellect, and creativity. The

respondent bias was a limitation of this study because participants may have minimized or overestimated their abilities, producing or leading.

Delimitations of the Study

A delimitation of this study was that the results came from a specific area of the country, which limited the generalizability of the study to other geographic regions. Additionally, the number of participants is limited to those serving in the three police departments. Another delimitation was that this study focused on the specific field of law enforcement, which might not allow the results to be generalized to other occupations. Additionally, this study considered only police officers and sheriff deputies and did not consider any other law enforcement agencies such as FBI, Homeland Security, interdependent Highway Patrol, Internal Affairs, Drug Enforcement, Park Police, and National Guard. Finally, the year that this study took place was 2019, which may have had particular factors that influenced the perceptions and self-evaluations of the participants.

Conceptual Framework

Schneider (2002) suggested possible associations among leadership practices, trust, and personality traits of law enforcement officers. The conceptual frameworks that guided this research were the Five Exemplary Leadership Practices Theory as described by Kouzes and Posner (2007), the cross-discipline view of trust by Rousseau, Sitkin, Burt and Camerer (1998), and the Five Factor Model (FFM) of personality traits defined by Costa and McCray (1992). Specifically, these theories were the basis for the research questions, the methods, and for the assumptions of this study.

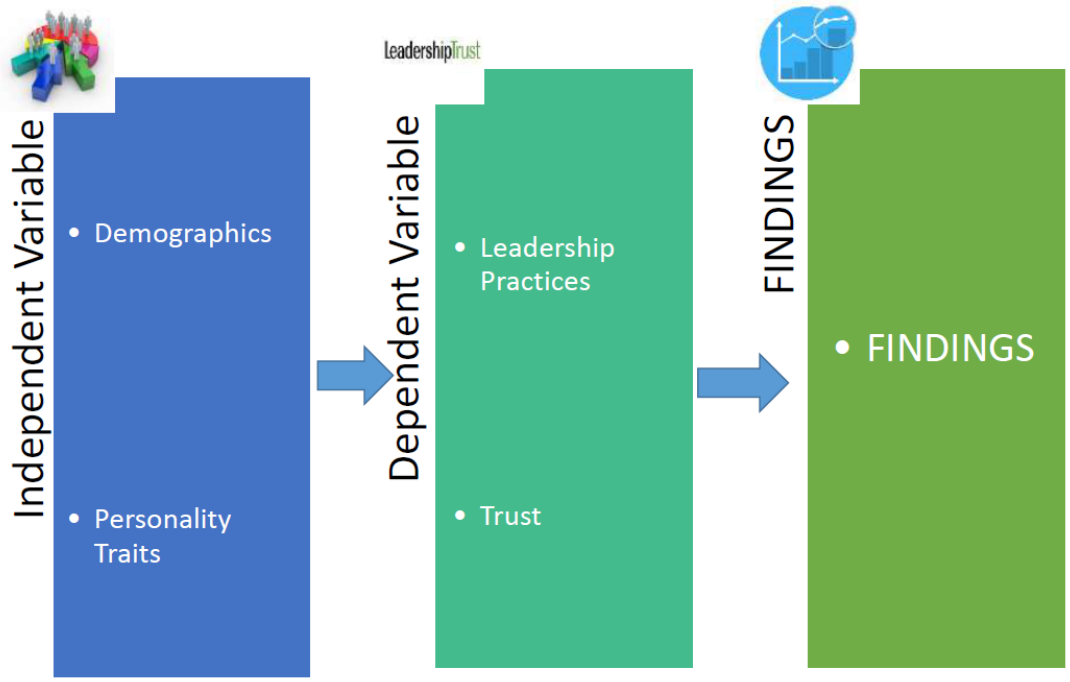
The study examined relationships among selected demographic variables, personality dimensions, leadership practices, and trust. Personality dimensions were treated as independent variables for this study; personality dimensions were used as a grouping variable (Figure 1). First, the study explored possible differences among selected police officers' demographic

groups based on self-reported assessment of leadership practices and trust. Second, it explored possible differences among groups established by personality traits.

Figure *1* provides a conceptual framework for the study. Demographic variables and personality dimensions functioned as independent variables; that is, these variables were used to group the responses of the police officers for analysis. The self-report variables including responses to LPI and Trust were used as dependent variables. The findings or outcomes of the study addressed the research questions discussed in the above section.

Figure 1

Conceptual Framework



Research has indicated that leadership may vary according to demographic factors and personal characteristics in general populations (Brandt & Laiho, 2013; Jurczak, 2006; Posner, 2018) and specifically, leadership varies within policing (Schafer, 2010; Schaveling et al., 2017; Silvestry, 2007). Kouzes and Posner's (2007) framework provided the foundation to assist in understanding leadership practices within law enforcement across various groups.

Luhmann (1980) theorized that expectations associated with trust are the mechanisms used by humans to reduce the complexities of social life that enable humans to function in life and society. Coleman (1990) contended that trust is a crucial element in accomplishing team goals beyond expectations for a group that exhibits trustfulness and trustworthiness. Interestingly, Rousseau and colleagues (1998) explained that theorists and researchers of trust have been modeling the concept as an independent variable, dependent variable, or interaction

variable (a moderating condition for a causal relationship). These authors concluded that trust within research frameworks provided richer and more complex cross-disciplinary views of many multifarious phenomena. The importance of trust for sustaining team and organizational effectiveness is increasingly being recognized (Dirks & Ferrin, 2001). Podsakoff, MacKenzie, and Bommer (1996) discussed the importance of the leader's trustworthiness, in building the followers' behavioral and emotional trust.

Costa and McCrae (1992) explained the personality trait theory that guided this study and the second research question. The researchers' proposition of the universality of the basic dimensions of personality (McCrae & Costa, 1992) provided a basis for the establishment of personality traits for this study. Specifically, the Big Five traits theory assisted in establishing groups. Research indicates that personality traits are highly correlated with leadership when traits are organized according to the five-factor model (Cowley, 1931; Judge, et al., 2002b; Kohs & Irle, 1920). Conceptually, the five traits of personality may be associated with leadership practices and trust.

It seems logical from a conceptual perspective that exemplary leadership practices are essential to community policing. The study evaluated the possible relationships among police officers' leadership practices, trust, and personality traits. The Exemplary Leadership Practices Theory (Kouzes & Posner, 2007), the cross discipline view of trust (Rousseau, et al., 1998), and the Big Five traits theory (Costa & McCrae, 1992) assisted in determining possible associations.

Definitions

Analysis of Variance (ANOVA). A statistical test procedure for comparing group means for statistical significance among many groups (Sprinthall, 2012).

Big Five Inventory (BFI). A 44-item inventory that measures an individual of the Big Five personality factors (dimensions): extraversion, agreeableness, conscientiousness, emotional stability, and intellect/imagination. Each of the factors is then divided into personality facets (Goldberg, 1993; John & Srivastava, 1999).

Community Policing: A philosophy, which promotes organizational strategies that support the systematic use of partnerships and problem-solving techniques to proactively address the immediate conditions that give rise to public safety issues such as crime, social disorder, and fear of crime (USDJ, 2014).

Counter-Majoritarian Leadership: The leadership process in which a police chief or leader takes politically unpopular steps to further the legitimate aims of policing in a generally just society (Heffernan, 2003).

Cronbach's Alpha Coefficient. A coefficient that provides a measure of internal consistency within the subscales and is commonly used to estimate reliability (Mertler & Vannata-Reinhart, 2017).

Culture: A pattern of shared basic assumptions learned by a group as it solves its problems of external adaptation and internal integration, which has worked well enough to be considered valid and be taught to new members as the correct way to perceive, think, and feel in relation to those problems (Schein, 2010).

Demographics: The study of a population based on factors such as age, race, and sex. Demographic data refers to socio-economic information expressed statistically, also including employment, education, income, marriage rates, birth and death rates and more factors (Chappelow, 2019).

Exemplary Leadership: The process of leading by example while empowering others to act and deliveron the promises made (Heffernan, 2003).

Experiment Trust Game: An experiment which is designed to demonstrate "that trust is an economic primitive," or that trust is as basic to economic transactions as self-interest (Berg, Dickhaut, & McCabe, 1995, p.123).

Law enforcement. Any agency which enforces the law. This may be a special, local, or state police, federal agencies such as the Federal Bureau of Investigation (FBI) or the Drug Enforcement Administration (DEA). Also, it can be used to describe an international organization such as Europol or Interpol (USDJ, 2015)

Leadership. A process whereby an individual influences a group of individuals to achieve a common goal (Northouse, 2019, p. 5).

Leadership Practices Inventory (LPI). A 30-item Likert-style questionnaire used to measure the effectiveness of school leadership broken down into the five practices of exemplary leadership: (a) Model the Way, (b) Inspire a Shared Vision, (c) Challenge the Process, (d) Enable Others to Act, and (e) Encourage the Heart (Kouzes & Posner, 2012).

Leader Trait Perspective. The trait theory of leadership is an early assumption that leaders are born and due to this belief; those that possess the correct qualities and traits are better suited to leadership. This theory often identifies behavioral characteristics that are common in leaders (Northouse, 2018).

Multivariate Analysis of Variance (MANOVA). A type of analysis of variance that tests whether two or more independent variables impact two or more dependent variables and is used to test for statistical significance (Mertler & Vannata-Reinhart, 2017; Sprinthall, 2012).

Occupational culture: The development of similar personal characteristics of members of a particular occupational group, through social interaction, shared experience, common training and affiliation, mutual support, and associated values and norms (Johnson, Koh, & Killough, 2009).

Occupational Environment: The physical surroundings and the social environment at a workplace (Monash Business School, 2019).

Organizational Culture: Values shared by colleagues in an organization and which become manifest through the occupational practices within that environment (Johnson, Koh, & Killough, 2009).

Pearson r Correlation. The appropriate measure of correlation when variables are expressed as scores. *Pearson r* measures the linear relationship between two variables represented as *r*. Value ranges from +1 to -1, noting a perfect positive and negative relationship, respectively, between two variables (Mertler & Vannata-Reinhart, 2017).

Perception. The important revelation that no two people experience and interpret sensations, situations, events, or their own feelings the same way in a given situation (Otara, 2011).

Personality traits. The characteristic patterns of thoughts, feelings, and behaviors that are stable, remain fairly consistent, and make a person unique with an enduring tendency to behave in a particular way throughout life. (Plotnik, 2014).

Police: The civil force of a national or local government, responsible for the prevention and detection of crime and the maintenance of public order (Oxford Dictionary, 2019).

Police/Law Enforcement Culture: Refers to the mix of informal prejudices, values, attitudes and working practices commonly found among lower ranks of the police and law

enforcement that influences the exercise of discretion. It also refers to the police's and law enforcement's solidarity, which may tolerate corruption and resist reform (Waddington, 2008).

Reform Leadership: The leadership process required to overcome allegations of corruption, police brutality or scandal, and turn a demoralized police department to a successful organization of community policing (Heffernan, 2003).

Reliability. Repeatedly achieving the same consistent result, using the same measure (Sprinthall, 2012).

Shared Variance. A common pattern in two or more sets of data that can be calculated using a correlation coefficient (r^2). If shared variance is greater than unique (individual) variance then r will be high. In essence, the percent of variance in one variable that can be attributed to another variable in a correlation by r^2 or r value (Sprinthall, 2012).

Trust: The expression of honesty, genuineness, integrity, selflessness, consistency and benevolence in human relationships, characterized by willingness to be vulnerable (Hall, 2009).

Trustfulness: The condition of being characterized by a tendency or readiness to trust others, free of distrust, suspicion, or the like (Educalingo, 2019).

Trustworthiness: Worthy of confidence specifically: being or deriving from a source worthy of belief or consideration (Merriam-Webster, 2019).

Validity. It is how well a scientific test or piece of research actually measures what it claims to measure, or how well it reflects the reality it claims to represent (Sprinthall, 2012).

Summary

Leadership among law enforcement officers is the most crucial element of performing their duties successfully in the community (Vanebo et al., 2015). Law enforcement officers as leaders operate in a uniquely stressful environment (Barker, 1999; Paoline, 2003; Pearson-Goff

& Herringhton, 2016) and must be capable of handling extreme situations with creative leadership practices that assist them to fulfil their duties (Vanebo et al., 2015). Although the relationship of personality traits and leadership has been debated (Conger & Kanungo, 1998; Cowley, 1931; Zaccaro, Foti, & Kenny, 1991) as well as trust and personality (Mayer, Davies, & Shoorman, 1995, Mooradian), there are specific factors that tend to affect leadership practices' changes in decision making (Grant & Langan-Fox, 2006; Judge et al., 2002b; Sutin & Costa, 2010). It has been argued that the work based leadership decision making is affected by personality changes in the Big Five tenets of personality (McCrae & Costa, 1992) specifically due to the work environment (Wu, 2016), which is also emphasized by law enforcement studies on work environment, leadership decisions and personality (Backteman-Erlanson, Jacobsson, Öster, & Brulin, 2011; Engel & Worden, 2003; Flynn & Herrington, 2015; Liberman, Best, Metzler, Fagan, Weiss, & Marmar, 2002; Padyab, Backteman-Erlanson, & Brulin, 2016).

In the fast evolving environment of law enforcement with uncharted and highly complex asymmetrical forms of violence (e.g., damaging infrastructure, conducting small-scale terrorist attacks by using cars, or trucks, the combination of virtual and physical crime) (Ricks, 2012; Roberts, Herrington, Jones, White, & Day, 2016), the leadership practices of law enforcement officers are of great interest and equal value for researchers, law enforcement administration, and citizenry (Roberts et al., 2016).

Organization of the Dissertation

Beginning with this introductory chapter, this dissertation is structured into four subsequent chapters. The second chapter provides a detailed review of the literature as it pertains to law enforcement officers' leadership, trust, and personality dimensions. The third chapter will provide a description of the methods utilized to conduct the study. The fourth chapter will

present the results of the research study, addressing the four questions which are the fundamental core of the study. Finally, chapter five will present a discussion of the findings, implications for practice, conclusions, and recommendations of the research study.

CHAPTER TWO - LITERATURE REVIEW

Upon being part of law enforcement, an officer enters a distinct subculture, which is governed by norms and values specifically designed to manage the strains created by the unique roles of law enforcement officers in the community (Van Maanen, 1974). Van Maanen (1974) explained that the police officers' unique perspective is influenced by their role in community policing. Additional parameters that influence this unique perspective include leadership practices, personality traits, and trust.

The literature review is divided into sections. The first section provides a brief overview of contemporary law enforcement leadership elements and roles in the United States, as well as the challenges. Within this section, the effects of the leadership practices and supervisory roles in community policing are discussed. The second section examines studies on leadership and its relationship to personality traits. The third section examines leadership and its relationship to trust, and the fourth section trust and its relationship to personality traits. The second, third, and fourth sections give emphasis on police studies and the importance to effective community policing. Within these sections, studies on the relationships of leadership, personality traits, and trust among both unranked and ranked law enforcement officers are discussed.

The remaining seven sections of the literature review examine the surveys utilized to investigate the leadership practices, personality traits and trust of law enforcement officers including a summary for each survey discussed. Specifically, the Leadership Practices Inventory (LPI) which measures the five practices of exemplary leadership: (a) Modeling the Way, (b) Inspiring a Shared Vision, (c) Challenging the Process, (d) Enabling Others to Act, and (e) Encouraging the Hear (Kouzes & Posner, 2012). The Big Five Inventory (BFI) (John & Srivastava, 1999) will be analyzed further in this section to provide a thorough understanding of

the instrument and its capability in personality traits assessment, its strengths and criticisms. The concept of trust will be examined, along with a brief discussion of the theories that underpin the survey utilized to assess general trust: the General Trust Scale (GTS) (Yamagishi & Yamagashi, 1994). The final section of this literature review provides a summary of the literature.

Contemporary Law Enforcement Leadership Elements and Roles

Contemporary law enforcement officers play various roles when leading (Adam & Villiers, 2003; Batts, Smoot, & Scrivner, 2011; Shafer, 2010; Walker & Katz, 2008). They must effectively operate in a complex social, political, and organizational environment, and must adapt to perform their duties successfully (Pearson-Goff & Herrington, 2014). The environment can be fast-paced, based on change and instability; therefore, law enforcement officers must become adept at change, and balance constancy and predictability to adhere to their professional responsibilities (Batts, Smoot, & Scrivner, 2011).

Contemporary Law Enforcement Leadership Elements

Adlam and Villiers (2003) discussed the role of the police officer within the community as a servant leader. Heffernan (2003) contended that contemporary police leadership, regardless of leadership style, is based on three basic leadership elements: a) *exemplary leadership*, b) *reform leadership,* and c) *counter majoritarian leadership* (Adlam & Villiers, 2003).

Exemplary Leadership. Heffernan (2003) noted that exemplary leadership is leading by example at every level. The author suggested that the actions and decisions of a leader become an example for the subordinates. Providing an example is crucial because an essential part of exemplary leadership by law enforcement officers concerns the interaction with public and community policing. Heffernan suggested that in a just society, citizens' encounters with law enforcement should be courteous and the way police officers exhibit exemplary leadership

should be by emphasizing their role as public servants. This is particularly important because most of the community and law enforcement encounters involve problems of coordination (e.g., traffic lights and traffic lanes), and service (e.g., provision of information to pedestrians and drivers, stray pets, noise complaints). Leading by example is an essential part of exemplary leadership because of the discretionary nature of adhering the law. For example, an officer may follow the spirit of the law, which entails the aim and the purpose of a law, or the letter of the law, which is a literal interpretation. In addition, Heffernan noted that in exemplary leadership a leader violating clear mandates of the law by interpreting ambiguous rules for self-interest undermines colleagues and subordinates, as well as community members' commitment to the prescribed law.

Exemplary leadership can vary individually. Studies based on field research proposed that law enforcement officers differed in their conceptions of the police role and their perceptions of leadership (van Maanen, 1974). Law enforcement officers also differed in their attitudes toward legal restrictions, legal institutions, discretionary enforcement, police supervision, and the community. Mastrofski, Worden, and Snipes (1995) reported that pro-community-policing officers arrested more selectively and with less regard for legal considerations and were friendlier to the public. Moreover, pro-community-policing officers exhibited no greater vulnerability to extralegal influences (e.g. race, gender, wealth, personal reputation) than their more traditionally oriented colleagues. In addition, leadership attitudes varied based on the composition of law enforcement entities and in departmental, as well as individual personality traits. Mastrofski and colleagues suggested that departments that emphasize community policing and community relations might produce a different set of decision patterns compared to those departments that do not emphasize community relationships.

Paoline et al. (2000) observed variation in law enforcement officers' attitudes; their working environment evolved with the implementation of community policing. The author's comparison was two years before community policing was implemented and noted that extending officers' capacity to handle incidents and deal with problems using less conventional tactics changed their occupational identity. According to the authors nonconventional tactics made law enforcement officers more likely to use their personality and social awareness rather than their authority to resolve issues. Nonconventional tactics also assisted law enforcement officers to use less of their coercive authority, which is an element of their occupational identity (Paoline et al., 2000). Consequently, Paoline and colleagues inferred that the change of the tactical outlook can affect police leadership practices and attitudes towards the public positively, which, according to Heffernan (2003) can assist a law enforcement officer to exhibit exemplary leadership.

Reform Leadership. Reform leadership epitomizes the reform that a department must undergo when charges of brutality or corruption stress the need for transparency (Heffernan, 2003; Walker & Katz, 2008). A necessary condition for successful reform leadership is exemplary leadership that is initiated by supervisors and is transmitted to frontline police officers. Heffernan suggested that a key component of reform leadership is a system of accountability and foreseeability. Assigning clear roles for police officers and criteria to fulfil their duties provides proper standards for performance. Additionally, to address the need for transparency, law enforcement departments should expand reform leadership through community engagement and public cooperation (Fielding & Innes, 2006). For example, they should include members of the community on advisory teams and brief them on issues relating the community (Fielding & Innes, 2006).

Paoline et. al. (2000) suggested that community policing might especially affect the organizational environment by expanding the range of functions that fall within the scope of the police role and by reordering the priorities attached to them. The authors suggested that officers who are socialized in an altered working environment can develop occupational attitudes, which can be more compatible with community policing because they deviate from traditional law enforcement cultural views, and which may assist reform leadership (Paoline et al., 2000).

Sykes (2014) proposed that social integration is a multifaceted concept, particularly regarding community trust attitudes towards law enforcement. Sykes found that not only do racial/ethnic differences exist in levels of law enforcement trust, but there are also modest differences in the relationship between social integration and trust in law enforcement. The findings suggest that efforts to improve social integration and community interaction can assist to improve perceptions of police (Sykes, 2014). Consequently, reform leadership, as proposed by Heffernan (2003), can be influenced, if not improved by law enforcement and community interaction through improving trust (Fielding & Innes, 2008).

Counter Majoritarian. Counter majoritarian leadership deals with practices that are unpopular and go contrary to the community demands. These include social control measures, which must be communicated and applied in the community with an understanding that police authority is derived from the law (Heffernan, 2003; Silvestri, 2007). Although the public usually welcomes steps to ensure safety, an exception may be if law enforcement officers use brutality against marginalized populations, which creates a sense of injustice. Heffernan (2003) reported that the three elements of leadership (i.e., exemplary, reform, and counter majoritarian) create challenges for contemporary law enforcement organizations. However, the author suggested that counter majoritarian leadership can create the greatest obstacles in community relationships

because of its unpopular nature of acting against the will of the majority of the public. In addition, Heffernan noted that in counter majoritarian leadership, the implementation of exemplary leadership addressing the community is critical.

In a study investigating the perception of justice in the police, Carr and Maxwell (2017) proposed that differences between internal perceptions of justice and external attitudes may be the result of organizational and supervisory practices that are transmitted to the police-community relationship. For example, the effect of a just department towards its police officers can create the same attitude of justice between the police officers and the community members. The study found a strong relationship between perceptions of organizational justice by police officers and trust in the public even when other relevant predictors were controlled (Carr & Maxwell, 2017).

Rosenbaum et al. (2005) proposed that the quality of the social encounter influences attitudes and trust toward the police, but only for citizen-initiated contacts. The authors found that in contacts initiated by residents, a negative experience produced a significant negative attitude toward the police whereas, when the police initiated the contact, a negative experience had no effect on attitudes (Rosenbaum et al., 2003). Consequently, for counter majoritarian leadership to be successful, police officers must trust the justice of their organization (Heffernan, 2003). Consistent with the findings by Carr and Maxwell (2017), Ambrose and Schminke (2003) found that organizational and supervisory justice affected public trust positively. Therefore, for meaningful and trusting relationships with members of the public, police must methodically initiate social encounters with the community (Rosenbaum et al., 2003).

The basic elements of police leadership are exemplary leadership, reform leadership, and counter majoritarian leadership, regardless of leadership style. However, Heffernan (2003) noted

that interaction of the three elements is required to induce trust between the community and law enforcement officers.

Community Policing

Historically, the law enforcement culture has idealized an aggressive approach to policing. It has prioritized law enforcement and crime fighting, which has resulted in increased abuse of authority and tension with the community (Rosenbaum Shuck, Costello, Hawkins, & Ring, 2005). During the 1980s community policing emerged as a dominant model in an effort to reunite the police with the community (Peak, 2009). Law enforcement underwent a transformation; community became the central focus of the policing model. Community members status was greater under community policing than under the traditional policing model that dominated until the 1980s (Peak, 2009; Walker & Katz, 2008).

During the Police Executive Research Forum (PERF) (USDJ, 2015) five recommendations were proposed by police and community groups. All reflected the idea of social interaction of police with the community at a level beyond what had been the norm. The first USDJ suggestion was to acknowledge and discuss with communities the challenges police are facing. The second suggestion was to be transparent and accountable. The USDJ recognized that being transparent can be deficient because some laws restrict the data and information that law enforcement officers can present to the public (Meijer, Conradie, & Choenni, 2014). The third USDJ suggestion was to take steps to reduce bias and improve cultural competency by embracing a variety of racial and ethnic backgrounds and cultures, which requires that officers be able to communicate effectively. Fourth, the USDJ proposed that an effort must be made to maintain focus on the importance of collaboration, and improved visibility in the community because many community members do not interact with law enforcement outside of enforcement

contexts. The fifth suggestion was that law enforcement organizations should promote diversity and ensure professional growth opportunities because most time of policing is spent on addressing community requests, while enforcement and crime fighting are limited (USDJ, 2015). Diversity according to USDJ (2015) can ensure a good rapport and communication with various community members and groups. Thus, departments should aim to recruit people who want to become officers based on the realistic understanding that community service to all members of the community is of outmost importance for fulfilling the notion *to protect and serve* (Engel & Worden, 2003; Meijer, et al., 2014; USDJ, 2015).

The paradox in community policing is that on one hand law enforcement officers have to lead community members and on the other hand, they are, in some cases, required to use coercive authority over the same community members (Paoline, 2003; Kappeler et al., 1998; Van Maanen, 1974). Moreover, law enforcement officers are required to establish trusting relationships with the citizenry while maintaining the discipline-unique coercive power and authority over citizenry (Adlam & Villiers, 2003; Paoline, et al, 2000; Skolnick, 1994). Consequently, the need for trusting relationships between law enforcement and community becomes pivotal to successful community policing (Backteman-Erlanson, Jacobsson, Öster, & Brulin, 2011; Moggré et al., 2017).

The occupational environment and its complex dynamics create significant challenges for today's police officers of all ranks (Moggré et al., 2017). According to Batts, Smoot, and Scrivner (2012), the challenges include daily community conditions, expectations of altruism, and critical life-changing decisions; these challenges require police officers to adopt and demonstrate community leadership skills. The complex dynamics of community police leadership are impacted by both the organizational and occupational culture of the police force,

community factors, and most importantly their individual relationships with the community (Cockcroft, 2013; Paoline, 2001; Paoline et al., 2000; Peak, 2009).

According to Pearson-Goff and Herrington (2014) the answer to the complexity of police roles is related to leadership, which is considered one of the most important predictors of whether organizations are able to effectively function in dynamic environments. The contemporary police leadership style is based on transformational leadership whereby supervisors encourage followers to adhere to leadership roles, and to do work that is well beyond the minimum expectations and requirements (Andreescu & Vito, 2010). Moreover, Herrington and Colvin (2016) contended that complexity requires innovation, experimentation, and leveraging thoughts, ideas, and experiences from a range of people.

Law Enforcement Supervisory Roles in Community Policing. Police officers and supervisors adhere to different leadership roles in policing, but their roles converge in community policing (Engel & Worden, 2003). For example, field supervisors and ranked patrol officers use the same actions to address issues in the community (Backetman-Erlanson et al., 2011) and gain the community's trust (USDJ, 2015). However, in the current environment where burnout among law enforcement officers is prevalent (Padyab, Backteman-Erlanson, & Brulin, 2016; Sanders, 2008), law enforcement leaders are expected to create purpose for their subordinates and motivate them to become leaders who are able to address the challenges (Andreescu & Vito, 2010). Law enforcement supervisors uphold the role of the inspirational guide to assist their followers to make meaningful contributions to their organization, train them, and instill leadership qualities needed to execute their respective duties successfully, including community policing (Andreescu & Vito, 2010; Swid, 2014).

In relation to successful community policing and role adherence, Backteman-Erlanson and colleagues (2011) investigated the importance of supervisory support and training in the law enforcement. The authors found that while attending to victims of serious accidents, police officers were comfortable when they felt there was a support system for their leadership practices, and had prior successful experience; in contrast, they reported being insecure when they felt burdened by uncertainty due to lack of training and support. The officers reported that the most important elements to adhering to their leadership role was their knowledge through training, and the support they received by the organization and supervisors in traumatic situations. This supports the idea that successful community policing requires the coexistence of knowledge through training and organizational support (Backetman-Erlanson et al., 2011).

Leadership and Personality Studies in the Police

Leadership concerning law enforcement and police officers has been of great research interest among scholars (Haberfeld, 2006; Scrivner, 2012; Steinheider & Wuestewald, 2008). However, studies in law enforcement leadership mostly have been concerned with the type or style of leadership of police administrators (Cockcroft, 2014; Moggré et al., 2017; Vito & Higgins, 2010;Vito, Vito, & Higgins, 2014), as well as effective leadership of executives and how it is manifested in specific environments (Bass, 1990; Kouzes & Posner, 2002; Schafer, 2010a). Other studies have focused on organizational and occupational culture (Cockcroft, 2013; Paoline, 2001, 2003) or the police culture as a byproduct of leadership or the leadership as a byproduct of culture (Paoline et al., 2000; Hoggett et al., 2018). Furthermore, there has been conflicting findings in research on personality traits of law enforcement officers and their role maintaining order and establishing an environment of security for citizens (i.e., community policing) (Laguna, Linn, Ward, & Rupslaukyte, 2010).

Leadership, Personality, and Failure

A relatively recent study examined the phenomenon of leadership from a unique angle: failure. Schafer (2010b) examined leadership as it relates to ranked law enforcement officers who failed in their leadership duties compared to ranked law enforcement officers who succeeded. Three hundred mid-level ranked police supervisors completed a 360^{o} evaluation survey. Findings indicated that ineffective leaders had questionable characters, neglected the needs of workers, displayed poor work ethic, and failed to communicate (Schafer, 2010b).

Similarly, Engel (2000) studied 58 ranked police supervisors over 600 hours and evaluated behaviors based on supervision tactics. Engel concluded that ineffective leaders displayed the same attributes of ineffective supervisory style as those investigated in Shafer's (2010b) study. Engel's (2000) study supported the notion that negative supervisory attitudes were opposite of behaviors of active supervisors who communicated, cared for the needs of police officers, and clearly presented expectations and roles. The findings by Schafer (2010b) are consistent with the extant literature on effective and ineffective leaders, both within police departments (Engel, 2000; Engel & Silver, 2001) and outside police departments (Bass, 1990; Burns, 2003; Collins, 2001; Kellerman, 2004; Kouzes and Posner, 2002; Lord, De Vader, & Alliger, 1986).

Another focus of Schafer's (2010b) study was to examine ineffective leadership in relation to police officers' behaviors. Interestingly, the greatest barriers to the expansion of effective leaders and leadership practices were lack of flexibility in adapting to circumstances, as well as cultural, structural, and political barriers. In a study regarding personality and the effect of circumstances, Penke (2011) noted that **"**personality traits do not exist in a vacuum instead they are only meaningful if they are considered together with situations where they lead to the

expressions of behaviors" (p. 87). Simply put, personality and situations are intimately interwoven in the origination of behavior, which is what Funder (2006) referred to as the personality triad.

Leadership, Personality, and Behavior

Funder (2006) noted that a person can be conceived as the sum total of all individual behaviors in all the real and potential situations of a person's life. A psychological situation potentially can be assessed in terms of the kinds of people who would be expected to perform specified behaviors in that situation. For Funder, the personality triad consists of a combination of situation, person, and behavior. In mathematical terms, a psychological situation is the sum of behaviors multiplied by the person; a person is the sum of situations multiplied by the behavior; a behavior is the sum of person multiplied by the situation. An example of the personality triad is that, in theory, if someone knows the person very well, that person can predict the behavior according to the situation. The same concept could theoretically be applied: a situation could predict the behavior of a person (Funder, 2006).

Voyer and McIntosh (2013) studied the consequences of power on individual behaviors; their findings reinforced the theory of the personality triad (i.e., personality traits, leading behaviors, and situation). They argued that power creates both temporary and enduring cognitive changes on individuals' perspectives of themselves and of their social environment. They contended that power transforms the way individuals lead and the way they follow and, therefore, their behaviors. Specifically, Voyer and McIntosh indicated that individuals' self-perceptions seemed to play a mediating role in the determination of behaviors of powerful and powerless individuals. The authors suggested that this relationship is moderated by organizational culture and structure, as well as personality traits. The findings of this study on

the power effects on self-perception have implications for police officers because they possess coercive authority and the power to cause harm (Paoline et al., 2000).

Leadership and Personality Traits

In a review of the trait perspective in leadership research, Judge et al., (2002b) used the five-factor model as an organizing framework to analyze 222 correlations from 73 studies. The authors suggested that personality traits, and specifically the Big Five Inventory (BFI), indicated a strong support for the leader trait perspective. Judge et al. were in agreement with research conducted by Lord, De Vader, and Alliger (1986) on leadership and personality traits, which used the meta-analytic technique of validity generalization of 27 studies (N=3668) and also emphasized a strong support of the with leader trait perspective when traits were organized according to the five-factor mode. Both studies, Judge et al. (2002b) and Lord et al. (1986), emphasized that findings did not indicate leadership effectiveness rather they referred to leadership emergence. Leadership emergence, which is the recognition of a leader by peers and followers, is a very important element of policing because each police officer should be a leader (Anderson et al., 2000; Haberfeld, 2006).

According to Engel (2000) and Engel and Silver (2001), there is a characteristic pattern of leadership behaviors that is considered successful and shared among police officers; However, Shafer, (2010a, 2010b) studied patterns of unsuccessful practices. Moreover, a relationship exists between situation, behavior, and personality (Funder, 2006; Penke, 2011), which can determine leadership practices and their respective effect (Voyer & McIntosh, 2013). Finally, studies indicate that there is a strong support between personality traits and leadership emergence (Judge et al., 2002b; Lord et al., 1986).

Leadership and Trust Studies

Trust, and the role it plays in leadership has been researched for decades (e.g. Argyris, 1962; Likert, 1967; McGregor, 1967) and researchers have proposed that it plays a dominant role in interpersonal, team, and organization-level outcomes. Trust has been a key concept in several leadership theories such as transformational leadership, and studies have shown that a characteristic of charismatic leaders is that they build trust in their followers (Kirkpatrick & Locke, 1996; Podsakoff, MacKenzie, Moorman, & Fetter, 1990). In the leader–member exchange theory, as described by Schriesheim, Castro, and Cogliser (1999), trust is considered to be a crucial element of dyadic relationships. Likewise, employees' perceptions of leaders' attributes and promotion of trust leads to team effectiveness (Bass, 1990; Hogan, Curphy, & Hogan, 1994). The importance of trust in leadership has also been emphasized in numerous disciplines (Dirks & Ferrin, 2002; Lee, Gillespie, Mann, & Wearing, 2010; Schriesheim et al., 1999).

Trust, Leadership and Team Performance

Dirks and Ferrin (2002) found that trust in a leader had a very high correlation with transformational leadership. One of the aims of Dirks and Ferrin's study was to provide estimates of the primary relationships between trust in leadership and key organizational outcomes. According to Dirks and Ferrin, leaders have an influence on how teams and organizational trust are shaped. The authors found that strong trust relationships improved work attitudes that could affect job satisfaction and commitment.

Lee et al. (2010) proposed how trust in the team can predict team knowledge-sharing, which can potentially lead to better team performance. The results of their study showed that trust in the team was more influential than trust in the leader when examining knowledge-

sharing. Serva, Fuller, and Mayer (2005) studied reciprocal trust between teams interacting over time and found that antecedents and outcomes of trust act similarly in team environments and interpersonal environments. Serva et al. found that risk-taking behaviors were related to team trustworthiness, which then affected trust and risk-taking behaviors. Poon (2006) also examined how trustworthiness facets like benevolence, integrity, and ability affect trust. The author concluded that there were both direct and synergistic effects in predicting trust in a supervisor and found that trust in a supervisor was related to an individual's willingness to assist coworkers, which in turn influenced team effectiveness.

Burke et al. (2007) suggested two issues that require future examination: expansion of trust research from dyads to team settings (i.e., three or more individuals) and an assessment of whether the components of trustworthiness (competence, benevolence, and integrity) are equally significant in trusting outcomes. The authors further noted that researchers may consider alternative research methodologies to provide theoretical advances and practical solutions through the knowledge already gained and bridge the existing research gap.

Trust and Personality Studies

The past 20 years have seen a resurgence of scholarship related to personality, facilitated in part by the emergence of understanding that traits are well organized within five broad domains of the Five Factor Model (FFM) (Costa & McCrae, 1992; McCrae, 2004; Mooradian et al., 2006). The FFM is a taxonomy for personality traits also known as the Big Five personality traits (Pervin & John, 1999). The five aspects of personality, according to FFM are Extraversion, Agreeableness, Conscientiousness, Neuroticism and Openness. The FFM also encompasses a number of narrower, more context-specific facets in a hierarchy of individual differences (John & Srivastava, 1999; McCrae, 2004). The five high-level dimensions are related closely to

underlying biophysiological such as chemical activity in the brain, and how neurotransmitters act at synapses to enable messages to be transmitted, as well as ns genetic structures such as DNA and RNA (Bouchard and Loehlin, 2001; McCrae and Costa, 2003). The lower-level, narrower and dimension-specific facets are related more closely to explicit, observable behaviors such as hostility and anxiety to acts of violence (Paunonen, Haddock, Forsterling, & Keinonen, 2003).

The Five Factor Model and Trust

Researchers have attempted to establish relationships among personality traits, trust, and trustworthiness using the Five Factor Model (FFM) (Dirks & Ferrin, 2002; Hogan & Holland, 2003; Mooradian et al., 2006). Hogan and Holland (2003) used socio-analytic theory to understand individual differences in people's performance at work, moving from general to specific job criteria. The authors proposed that more sociable and cooperative behaviors exhibited by extraverts may be indicative of a willingness of extraverts to trust others more quickly. Inversely, according to the theoretical perspective of Jung (as cited in Stevens, 1994) introverts were perceived as hard to trust because they are hesitant and reflective, which are attributes that eventually may lead to mistrustfulness.

In contrast, Sicora (2014) found that extraverted leaders were perceived as less trustworthy compared to introverts, noting that this finding was not consistent to all leaders perceived as leading with extraverted-feeling energy. The study concluded that other personality facets within extraversion were equally crucial in this distinction (Sicora, 2014). Additionally, Sicora stated that relationships of propensity to trust, agreeableness, and emotional stability (vs neuroticism) validated previous studies of personality and trust behaviors that had proposed individuals with higher levels of agreeableness or higher levels of emotional stability tended to have a higher propensity to trust (Fahr & Irlenbusch, 2008; Mount et al., 1998). Agreeableness,

one of the higher levels of the five factors, encompasses the facet of trust as part of its taxonomy (Costa & McCrae, 1992; Pervin & John, 1999). However, Mooradian and colleagues (2006) argued that no research connects this robust, high level dimension of personality to interpersonal trust and that research is scarce on the five factors and possible relations to trust.

Agreeableness has been defined as the tendency to be altruistic, trusting, modest and warm; individuals with a tendency to easily socialize (John and Srivastava, 1999). It is the least heritable of the five dimensions introduced by the FFM (Bouchard and Loehlin, 2001; Graziano, 1994; Laursen, Pulkkinen, & Adams, 2002; Waller, 1999). Etymological personality facets attributed to agreeableness include warmth-affection, gentleness, generosity and modesty-humility (Saucier & Ostendorf, 1999). The individual who possess agreeableness is characterized as altruistic, empathic, and helpful (Costa & McCrae, 1992).

Researchers (Bouchard and Loehlin, 2001; Graziano, 1994; Laursen, Pulkkinen, & Adams, 2002; Waller, 1999) have suggested that agreeableness may interact with other traits to produce positive and negative life outcomes. Perhaps accordingly, agreeableness was found to predict better performance evaluations, especially in jobs involving interpersonal interactions and collaboration in service settings (Hurley, 1998; Hurtz & Donovan, 2000; Mount, Barrick & Stewart, 1998). In contrast, researchers have contended that disagreeableness is associated with violence and vandalism (Heaven, 1996) and the antagonistic effects of agreeableness (Laursen et al., 2002).

DeNeve and Cooper (1998) proposed that the propensity to trust is a tendency to make attributions of an individual's actions in either an optimistic or a pessimistic way. Mooradian and colleagues (2006) stated that an individual with high trust assumes that most people are fair, honest, and have good intentions; someone low in trust see others as selfish, devious, and

potentially dangerous. Mayer, Davies, and Shoorman (1995) claimed that people with different developmental experiences, personality types, and socio-cultural backgrounds differ in their propensity to trust. In addition, the authors suggested that propensity to trust is related to adjustment, the development of and the satisfaction in intimate relationships (Mayer et al., 1995).

Mooradian and colleagues' (2006) explored relationships between agreeableness and the propensity to trust using survey data from 100 employees of an enterprise. The goal was to measure multiple constructs and various components of trust with personality traits and specifically with agreeableness. The authors concluded that agreeableness and propensity to trust were linked to knowledge-sharing via interpersonal trust and proposed that more research should be conducted to enrich the understanding of these relationships by replicating the study using larger and more diverse samples.

In summary, people with different experiences exhibit different propensities to trust (DeNeve & Cooper, 1998; Mayer et al., 1995) and specific personality traits such as extraversion vs. introversion have produced mixed outcomes (Dirks & Ferrin, 2002; Fahr & Irlenbusch, 2008; Hogan & Holland, 2003; Mooradian et al., 2006; Mount et al., 1998; Sicora, 2014). Studies have suggested that agreeableness is one of the higher levels of the five factors and it includes the facet of trust (Costa & McCrae, 1992; Pervin & John, 1999). Moreover, research has indicated that the narrower and domain-specific facets are related to observable behaviors such as hostility and anxiety to acts of violence (Paunonen, Haddock, Forsterling, & Keinonen, 2003). Following is the description of the instruments used to measure leadership (Leadership Practices Inventory/LPI), trust (General Trust Scale/GTS), and the personality (Big Five Inventory/BFI).

Leadership Practices Inventory

Leadership is a distinguishable set of skills and practices that is available to everyone, not just a small number selected charismatic types (Harvey, 2004). Leadership has been traditionally conceptualized as an individual-level skill, and it is estimated that its development occurs through intrapersonal and interpersonal training (Day, 2001; Schafer, 2010a; Schafer, 2010b).

Kouzes and Posner over 30 years ago sought to investigate the best practices of leaders and focused their efforts on comprehending the leadership practices of exemplary leaders while they were performing at their best (Kouzes & Posner, 1988). The Leadership Practices Inventory (LPI) was developed between 1983-1988 after more than 550 managers reported their personal best in surveys (Kouzes & Posner, 1988). In the three years of their research, the authors received a great number of reports and a vast number of responses from different levels of management and a variety of professional private and public entities. By 1988, Kouzes and Posner concluded their research and developed the LPI questionnaire, which provided a model of examination of Exemplary Leadership (Kouzes & Posner, 1988, 2012).

Model Examination

Kouzes and Posner (2013) indicated that the LPI can be administered in two versions. The observer-assessment version is intended to measure the subordinates' perceptions of their supervisor's leadership practices; the self-assessment version is intended to measure the leader's perceptions of his/he own leadership practices. In 2013, Kouzes and Posner reported that over three million people have utilized the LPI as an assessment tool. The LPI consists of 30 statements, with six (6) statements measuring each of the five (5) practices. Each of the 30 statements is rated on a 10-point Likert-type scale: (1) Almost Never, (2) Rarely, (3) Seldom, (4) Once in a While, (5) Occasionally, (6) Sometimes, (7) Fairly Often, (8) Usually, (9) Very

Frequently, and (10) Almost Always (Kouzes & Posner, 2013). The *Leadership Challenge* (Kouzes & Posner, 2012) was the authors' effort to assist leaders engage in these best practices, in order to strengthen their leadership skills and abilities. The Five Practices of Exemplary Leadership described in the book as: (a) Model the Way, (b) Inspire a Shared Vision, (c) Challenge the Process, (d) Enable Others to Act, and (e) Encourage the Heart.

The Five Exemplary Leadership Practices

Each of the Five Practices of Exemplary Leadership are comprised of two parts: (a) the exemplary leadership practices and (b) the commitments embedded in each of the five leadership practices (Truesdell, 2011). Kouzes and Posner (2012) suggested that the ten commitments of exemplary leadership (two in each practice) represent commitments of leadership excellence. The authors explained that although the labels have been through several iterations, the fundamental pattern of leadership behavior of exemplary leadership practices is best described by the commitments (Kouzes & Posner, 2012; Vito & Higgins, 2010). The ten commitments along with the five practices are outlined below in Table 2. The succeeding sections describe each practice and their respective commitments to provide a better understanding of the instrument.

Table 1

The Five Exemplary Leadership Practices and Commitments

Exemplary Leadership Practices	Commitments
Modeling the Way	a. Set the example b. Plan small wins
Inspiring a Shared Vision	a. Envision the future b. Enlist the support of others
Challenging the Process	a. Search for opportunities b. Experiment and take risks
Enabling others to act	a. Foster Collaboration b. Strengthen others
Encourage the Heart	a. Recognize contributions b. Celebrate accomplishments

Source: Designed by the author

Model the Way. Leaders establish principles that incorporate the way people should be treated and the avenue to accomplish goals (Kouzes & Posner, 2012; Roberts et al., 2016). The idea of modeling the way includes both of the commitments, set the example and plan small wins (Kouzes & Posner, 2012). First, the leader must clarify values by setting a personal example. This can occur if the values are shared and the leader finds the voice to affirm those values (Daniel, 2011; Kouzes & Posner, 2007). Kouzes and Posner (2012) noted that if a leader is unable to find a voice to affirm the values, the leader will mimic someone else and will lose the chance to gain integrity to lead. Shared values, according to the authors, promote loyalty, teamwork, and a strong sense of the immediate goals to be achieved.

When referring to goals, the authors emphasized the second commitment of modeling the way, which is to plan small wins. Kouzes and Posner (2012) explained that change can overwhelm people and hinder change due to complexity of tasks. Leaders should set interim goals that team members can achieve as they look forward to greater goals (Truesdell, 2011). In essence, Modeling the Way is a process whereby leaders personify goals, align their behaviors

with what is asked by subordinates and set an example by participating in the process and by creating the opportunities for successful completion of goals (Kouzes and Posner, 2012).

Inspire a Shared Vision. Kouzes and Posner (2012) suggested that the process of inspiring a vision entails the two commitments, envisioning the future and enlisting others. The two commitments act as appealing concepts to the values of team members (Loke, 2001). To envision the future Kouzes and Posner (1988) suggested that "pioneering leaders rely on a compass and a dream. Visions are the leader's magnetic north; they give direction and purpose to the organization" (p. 5). The importance of imagining the team's possibilities and finding a common purpose for the future by reflecting on past experiences while attending to the present is considered crucial for a successful future (Kouzes & Posner, 1988; Truesdell, 2011).

The second commitment requires a process of enlisting others to provide a common vision, which requires an appeal to common ideas and a clear, dynamic vision (Kouzes & Posner, 2012; Truesdell, 2011). Leaders succeed in inspiring vision by their captivating appeal and quiet persuasion (Kouzes & Posner, 2012). Trusdell (2011) added that finding a common vision requires the ability of leaders to listen to team members and to determine what is actually meaningful to their teams. The appeal to team members' values, interests, ideals, principals, and aspirations creates a condition where constituents perceive the leader's values and vision as their own (Kouzes & Posner, 1988). Consequently, to animate the vision, leaders must understand their group, and sensing the group's needs and aspirations (Truesdell, 2011). An exemplary leader can communicate vision by expressing emotions (often termed "charisma") (Truesdell, 2011, p. 4) and by speaking genuinely from the heart. Brown and Posner (2001) noted that through authenticity and emotional openness with team members, leaders can inspire a shared vision and reveal to the team the future possibilities of an organization.

Challenge the Process. Leaders search for opportunities by seizing or creating initiatives to change the status quo; this is the first commitment of challenging the process (Kouzes & Posner, 2012). A leader seeks for ways to improve the organization, looks outwards to innovation, and takes risks by experimenting which is the second commitment for the practice of challenging the process (Kouzes & Posner, 2012). Challenge the Process is about innovation and encouragement of team members to exceed and achieve things beyond their self-perceived limits (Chang, 2014). Leaders must be receptive and identify the talents of every person in a team, continuously assisting their subordinates to develop their talents (Kouzes & Posner, 1998, 2012).

When adopting Challenge the Process, leaders are encouraged to recognize small and large wins (Chang, 2014). According to Kouzes and Posner (2012) small wins can play a very important role is substantiating the goal. Visible small wins are crucial for the long term success of the team and the achievement of long term goals (Chang, 2014; Truesdell, 2011). Furthermore, this process requires that leaders be responsible for encouraging communication between their team and the outside world. Only the leader can develop the climate for a successful communication process (Truesdell, 2011; Vito & Higgins, 2010). Achieving the goals envisioned by leaders requires an environment that promotes risk taking (Kouzes & Posner, 2012; Truesdell, 2011). Generally, Challenge the Process is a condition that arises when leaders know that risk taking involves mistakes and failures, and they accept the inevitable disappointments as learning opportunities (Wiley, 2018).

Enable Others to Act. Enable Others to Act embodies two commitments, fostering collaboration by building trust and strengthening relationships (Kouzes & Posner, 2012). Exemplary leadership and achievement of goals can only happen if leaders create a climate that facilitates relationships built on trust (Truesdell, 2011). A trustful collaboration is the key that

allows organizations of all types and sizes to function efficiently and effectively. Long (2018) indicated that "when subordinates trust their managers they are more willing to comply and cooperate with their directives because they are more confident that those managers share their values and are working to promote their interests" (70).

Developing competence and confidence are components of strengthening others (Vito & Higgins, 2010). To develop confidence, leaders must realize that greater power comes from involving people in important decisions and acknowledging their contributions (Truesdell, 2011). Empowering team members increases team and individual accountability and eventually leads to optimal results (Kouzes & Posner, 2012).

According to Long (2018), a key challenge for managers seeking to promote subordinate cooperation is that they must manage the inherent tensions between control and trust (Long, 2018). Kouzes and Posner (2012) indicated that being in control of surroundings and trusting assists individuals to become more completely engaged in their work, which is at the center of strengthening others. Enabling others to act is a process that occurs when a leader develops trusting, cooperative relationships among the team members (Brown & Posner, 2001). As Kouzes and Posner (2012) suggested, with enabling others to act:

> Leaders invest in creating trustworthy relationships. They build spirited and cohesive teams, teams that feel like family. They actively involve others in planning and give them the discretion to make their own decisions. Leaders make others feel like owners, not hired hands (p. 214)

Encourage the Heart. The final Exemplary Leadership Practice is Encourage the Heart. This indicates that leaders should first recognize contributions by exhibiting appreciation for individual excellence, and, second, celebrate the values and victories of the team (Kouzes &

Posner, 2012). For exemplary leaders, recognizing team member contributions and finding creative and personal ways to celebrate accomplishments while emphasizing personal recognition is essential for the team cohesiveness (Long, 2014; Vito & Higgins, 2010). Having high expectations for a team shows that a leader believes in the abilities of the team, which increases the likelihood of a higher performing group (Kouzes &Posner, 2012; Truesdell, 2011). This practice encourages leaders to be truthful and provide genuine feedback to group members, which in turn shows appreciation, increases their value, and improves commitment to the goal. It suggests that personalizing recognition shows teammates that their great and hard work is noticed and appreciated. It is pivotal in the Encourage the Heart practice to expect the best of a team's performance because, as Kouzes and Posner (2012) indicate; "When you expect people to fail, they probably will. If you expect them to succeed, they probably will" (p. 277).

When celebrating values and victories, community is established by public and regular celebrations as well as by creating a net of social support, which displays the interest in others (Kouzes & Posner, 2012; Vito & Higgins, 2010). Highlighting team members' efforts in a public setting reminds people why they are a part of the organization (Truesdell, 2011); regularly celebrating accomplishments demonstrates how much a leader values the team's dedication to the respective task (Vito & Higgins, 2010). Kouzes and Posner (2012) indicated that leadership is about relationships. When a leader is personally involved and demonstrates to teammates that he/she cares, while simultaneously showing them respect, the leader's integrity in enhanced. Respecting, being involved, and caring are ways to enact values, beliefs, and ideals of a team. The authors propose that leaders should invest in fun and "always be in the lookout for people doing things right" (Kouzes & Posner, 2012, p. 321), providing the example for everybody

because as the indicate leaders should make sure that; “the organization is not regarded as the place where fun goes to die” (p. 327).

Criticism of the LPI

The main criticism that the LPI has received is that the inventory is based on transformational leadership (Carless, Wearing, & Mann, 2000). Carless and colleagues (2000) argued that the model could not predict distinctly defined behaviors of leadership other than transformational leadership behaviors. Nevertheless, they commended the instrument in that it not only focused on the apex of the leadership hierarchy (e.g., executives, CEOs), it could be used in lower level leaders as well Carless and colleagues (2000) indicated that the LPI could identify challenging, inspiring, enabling, modeling, and encouraging in low level supervisory positions.

Another criticism argued by Fields and Herold (1997) was that the LPI could only capture aspects of transformational leadership and that results were mixed on the subject. However, there is no evidence in literature which indicate that the LPI is not a valid tool (Piral, 2018; Roberts et al., 2016; Vito et al., 2014). Specifically, for assessing leadership practices of law enforcement officers’ in middle and lower level supervisory positions, the LPI has proved to be a valid and reliable survey tool (Kouzes & Posner, 2012; Posner, 2016; Vito & Higgins, 2010; Vito et al., 2014).

Summary of Leadership Practices Inventory (LPI)

The Leadership Practices Inventory (LPI) was developed in two fundamental versions the observer version, and the self-assessment version, which is indented to measure the leader’s perceptions of his/he own leadership practices. A great number of people accounted to millions utilized the LPI as an assessment tool (Kouzes & Posner, 2013). It has been developed to record

the leaders' perspective on their "personal best as leaders" (Kouzes & Posner, 1988, p.484). The LPI included five subscales that encompass five Exemplary Leadership Practices and their respective commitments. Although LPI has been criticized for better recording the leadership practices in the top of hierarchy apex, it has been emphasized by researchers that it could be used successfully also in lower level leaders or those that perceive themselves as leaders (Carless et al., 2000; Piral, 2018; Vito, Vito, & Higgins, 2014). Leadership practices surveys including the LPI (Harvey, 2004; Johnson, 2011; Sherrilll, 2015) have been used in conjunction with various personality dimension tools (Judge et al., 2002b; Lord et al., 1986), and trust surveys (Cho & Poister, 2014; Gómez, & Rosen, 2001; Lee et al., 2010) to record possible correlations or relationships. Following is a section providing an analysis into trust, which is a crucial element of effective leadership practices (Kouzes & Posner, 2012).

Trust

Trust is a concept in the social sciences that is routinely used and analyzed by journalists, moral philosophers, politicians, and even natural scientists (Robbins, 2016). However, trust is a disputed term, with minimal consensus on its meaning (Levi & Stoker, 2000). Trust, according to Levi and Stoker, is relational and it involves the vulnerability of an individual to another individual or group. Trust is rarely unconditional; it is given to specific individuals or groups over specific areas. For example, police officers may entrust their lives to their unit partners but not trust the supervisors or executives of their department. Generally, trust or distrust judgments are expected to inspire courses of action in a positive or negative manner respectively (e.g., cooperation vs. lack of cooperation) (Levi & Stoker, 2000), which makes trust crucial particularly when law enforcement personnel are faced with "life threatening incidents" (Pitel, Papazoglou, & Tuttle, 2018, p. 2).

Trust is an essential part of all social and organizational relationships (Barber, 1983; Bennis, 1989; Daley & Vasu, 1998; Fukuyama, 1995; Little & Fearnside, 1997; Mishra, 1996; Misztal, 1996; Reynolds, 1997; Quinlan, 2008). Robbins (2016) provided an description of trust, which is centered on how one trusts, who one trusts, and what one trusts another person to do. The author argued that the varieties of trust are not trust, but alternative cognitive processes that serve as sources of trust (Robbins, 2016). In alignment with Robbins (2016) perspective, the current study's definition of trust is based on work by Hall (2009), who defines trust as the expression of honesty, genuineness, integrity, selflessness, consistency and benevolence in human relationships, characterized by willingness to be vulnerable.

General Trust Examination

Yamagishi and Yamagishi (1994) were the originators of the General Trust Scale (GTS) and provided a cognitive approach to the concept of general trust by describing trust as a bias that arises when an individual engages in a transaction with another individual without complete information, assuming that the other will act in a cooperative manner. Trust includes the expectation that the other party is capable of fulfilling the promised action. Trust in its purest form is the believed intention and benevolence of another party to fulfill a promise. Yamagishi and Yamagishi (1998) suggested that benevolence is based on knowledge people perceive they possess, without having the full body of information about the intentions of another party.

General trust in a social environment is based on skills or "social intelligence," which Yamagishi and Yamagishi (1994) defined as "the ability to detect and process signs of risk in social interactions" (p. 126). Therefore, trust is perceived as a positive estimation of intentions, or, in some cases, an overestimation of a situation (Yamagishi & Yamagishi, 1994). Consequently, trust is considered an important predictor of interpersonal and group behavior that

influences society in many levels (e.g., social, political, financial relationships) (Ermisch, Gambetta, Laurie, Siedler, & Uhrig, 2009; Hosmer, 1995).

In summary, general trust is perceived as a positive estimation of intentions and is based expectation that the on the capability of another other party to fulfil a promised action. It is the purest form of a believed intention and benevolence of another party to fulfilling a promise. Because of social uncertainty in relationships, trust is signified as a critical element for the society both in a micro and macro level. Indeed, trust acts as a link between insecurity and social balance for the benefit of interacting parties. Lastly, trust is an essential component of social interactions and expected behaviors that influence the relations at several levels of a society (e.g. professional social, political, financial, religious).

General Trust Scale (GTS)

Researchers have contended that generalized trust is the bedrock of cooperation, and that trust-based cooperation is central to the well-being of society (Blok, 2016; Ermisch et al., 2009; Nannestad, 2008). Uslaner (2002) proposed that generalized trust is determined by cultural norms that are transmitted through socialization processes and provided empirical support for causal effects of levels of optimism and trust. Trust is ultimately based in moral norms (Uslaner, 2000, 2002) and increases cooperation among mutually trusting parties (Nannestad, 2008). Therefore, measuring trust reliably, particularly in law enforcement entities where trust is critical, becomes crucial.

The General Trust Scale (GTS) (Yamagishi & Yamagishi, 1994) measures beliefs about honesty, and trustworthiness of others in general. Essentially, the GTS measures the level an individual trusts other individuals in their professional and social environment. A number of studies concerning trust have been conducted with multiple populations, particularly because the

GTS was first used in Japan (Yamagishi, 1986; 1988; Yamagishi & Yamagishi, 1989). The GTS has been tested in multicultural environments and in various professional domains to develop the six-item GTS (Yamagishi, 1986; 1988; Yamagishi & Yamagishi, 1989). The GTS used in the current study consists of six items, measured in a five-Likert scale (Gheorghiou, M., Vignoles, V., & Smith, 2009; Kramer, 1999; Levi & Stoker, 2000; Yamagishi & Yamagishi, 1994). Specifically, the six questions of the GTS are as follows: (a) Most people are basically honest, (b) most people are trustworthy, (c) most people are basically good and kind, (d) most people are trustful of others, (e) I am trustful, and (f) most people will respond in kind when they are trusted by others.

Yamagishi (1998) argued that strong norms of identification with an individual's group (e.g., law enforcement groups, sub-groups and hierarchies) results in group favoritism. The close relations with members of an individual's in-group and the increased cooperation among in-group members work to the disadvantage of cooperation with an out-group. This process contributes to a closed society in which trust ties are weak, while assurance ties are strong (Gheorghiu et al., 2009). Glaeser and colleagues (2000) explained that when individuals are close socially and interact regularly, both trust and trustworthiness rise.

Although, research suggests that homogeneous samples produce robust data on trust scales, the GTS has been used in multiple populations and in various professional domains (Yamagishi & Ymagishi, 1994). Yamagishi and Yamagishi (1994) referred to the importance of generalized trust measurements in environments of social uncertainty, which they claimed is more evident in dynamic environments. Furthermore, Cook and Watabe (1998) claimed that the GTS measures general trust, an overall score of the degree of trustfulness of an individual, which

they described as the condition of being characterized by a tendency or readiness to trust others, free of distrust, suspicion, or the like (Educalingo, 2019).

Several scholars have used the GTS to measure the beneficial effects of generalized trust (e.g., cooperation, communication, empowerment, less job turnover) (Blok, 2016; Levi & Stoker, 2000; Nannestad, 2008; Van Graen, 2016; Yamagishi & Yamagihi, 1994). In a series of experiments, Yamagishi et al. (1998) concluded that, under conditions of social uncertainty, participants who had high levels of generalized social trust were more likely to commit to a particular partner throughout a number of economic transactions between buyers and sellers, particularly compared to those with low levels of generalized social trust. The findings also supported the proposition that commitment formation was greater when social uncertainty was high compared to when social uncertainty was low, particularly of those individuals with a lower degree of generalized trust. The researchers concluded that the emancipating role of generalized social trust became evident when considering individuals. Undoubtably, the GTS reported validity and reliably data go beyond the limits of criticism because it has been proved a reliable tool in different cultures and professional domains (Gheorghiou, M., Vignoles, V., & Smith, 2009; Jasielska, Rogoza, Zanjenkowska, & Russa, 2019; Kramer, 1999; Levi & Stoker, 2000; Montoro, Shih, Roman, & Martinez-Molina, 2014; Yamagishi & Yamagishi, 1994).

Criticism of Trust Measurements

The basic criticism of trust and trust measurements refers to the conceptualization of trust and its definition. Robbins (2016) argued that the mis-conceptualizations regarding trust, including risk, uncertainty, risk-taking decisions and behavior, cannot be addressed if they are not integrated into a structural-cognitive model. Consequently, a concept that is not clearly defined, and its proposed dimensions are not fully identified provides questionable measurement

tools, and data measurements (Glaeser, Laibson, Scheinkman, & Soutter, 2000; Robbins, 2016; Naef & Schupp, 2009).

Although the topic of trust has been researched by scholars in different domains (Barber, 1983; Bennis, 1989; Daley & Vasu, 1998; Fukuyama, 1995; Little & Fearnside, 1997; Mishra, 1996; Misztal, 1996; Reynolds, 1997; Quinlan, 2008, Yamagishi & Yamagishi, 1996), one of the main criticisms is that the question how trust can be measured has not been answered properly (Nannestad, 2008). The reason for this criticism is that previous studies have shown that the main measurement methods of trust (i.e., the survey based generalized trust question and the experimental trust) do not correlate (Fehr, 2009; Fehr et al., 2006; Glaeser et al., 2000; Nannestad 2008).

There is still a wide gap between the theoretical and conceptual work on trust in the majority of empirical studies. According to Nannestad (2008), a great number of the recent empirical work on trust does not seem to proceed from any clear account of what is meant by trust. Therefore, trust becomes what is measured by one or more survey questions or by observable behavior of subjects in certain experimental trust games (Nannestad, 2008; Naef & Schupp, 2009). In the same respect, cross-country variations in the levels of generalized trust, and the development in these levels over time within countries, are equally criticized. The reasons behind the criticism is that levels of generalized trust vary widely across countries. For example, the Nordic countries and the Netherlands invariably turn out to have the highest trust levels, whereas, generalized trust levels are particularly low in South America and in most post-communist countries (Putnam, 1993). Consequently, researchers have suggested that generalized trust should be measured among homogeneous groups for providing robust data (Blok, 2016; Glaeser et al., 2000; Holm & Danielson, 2005).

Hardin (2006), who after reviewing current experimental and survey-based research on trust, arrived at the conclusion that research on trust should be dismissed and was extremely critical of trust research and measurement. Hardin proposed that protocols should address standard conceptions of trust and provide a constructive role in explaining social behavior, institutions, or social and political change. Following a less extreme view, Nannestad (2008), proposed instead of adding to the pile of already existing studies, scholars should begin sifting these results to find out which results generalize, and which do not.

Summary of Trust

Trust is an essential part of all social and organizational relationships, almost paralleled to the expectations of the natural order in human society (Barber, 1983; Bennis, 1989; Daley & Vasu, 1998; Fukuyama, 1995; Little & Fearnside, 1997; Mishra, 1996; Misztal, 1996; Reynolds, 1997; Quinlan, 2008). Trust is the believed intention and benevolence of another party fulfilling a promise and benevolence is based on knowledge people perceive they possess. Therefore, trust is the perceived positive estimation of intentions for another party without being fully informed of the other party's intentions (Yamagishi & Yamagishi, 1994). Consequently, generalized trust has been considered the foundation of cooperation between parties and has been measured by the utilization of the General Trust Scale (GTS) (Yamagishi & Yamagishi, 1994). Although, there has been criticism involving the varieties of trust (Uslaner, 2003), the GTS has been used in conjunction with other surveys (Cho & Poister, 2014; Hiraishi, Yamagata, Shikishima, & Ando, 2008; Lee et al., 2010; Mooradian et al., 2006) and produced robust results in measuring various psycho-social phenomena (e.g. personality dimensions and trust, leadership practices and trust) (Blok, 2016; Levi & Stoker, 2000; Nannestad, 2008; Van Graen, 2016; Yamagishi & Yamagihi, 1994; Yamagishi et al., 1998). The following section provides an analysis of a personality

dimension survey tool that has been used in conjunction with Trust known as the Big Five Inventory (BFI).

Big Five Inventory (BFI)

The Big Five Inventory (BFI) evolved as a result of numerous research studies. Initial research was initiated by Fiske in 1949 and extended by Goldberg in 1981 (John & Srivastava, 1999). The prototypical components of the Big Five were developed by evaluating the common elements across studies (John, Donahue, & Kentle, 1991). The 44-item BFI was developed to represent the prototype definitions that were developed through expert ratings and subsequent factor analytic verification (Pervin & John, 1999). The main reason for the creation of the BFI was to construct an inventory that would permit a flexible and efficient assessment of the five personality dimensions (Pervin & John, 1999). Ozer and Benet-Martínez (2006) noted that the Big Five has been used in numerous research studies. For example, the BFI has been used to study relationships among Personality characteristics and happiness, physical wellbeing, and psychological health. Additionally, the BFI was used to study the quality of relationships with peers, occupational choice, levels of satisfaction, quality of performance, and community involvement (Ozer & Benet-Martínez, 2006).

Empirical literature suggests that personality scales may prove useful in predicting good police performance (Mirable, 2008; Reaves & Hickman, 2004; Sanders, 2008). Police departments have used personality assessment tools in their recruiting process and their evaluation of police executives, police officers, and law enforcement personnel (Salters-Pedneault et al., 2010; Sanders, 2008;). However, Sanders (2008) noted that relatively few studies have been conducted on the issue of personality traits and leadership performance among

police officers and the great bulk of research is almost over two decades old (see Burrbeck & Furnham 1984; Gaines and Falkenberg, 1998; Reaves & Hickman, 2004).

Big Five Model

The five factor model of personality consists of the following dimensions: Openness to experience (O), Conscientiousness (C), Extraversion (E), Agreeableness (A), and Neuroticism (N) (John, O. P., & Srivastava, 1999; McCrae & Costa, 2007). An easy to remember acronym for the five factors is OCEAN. The five factors of personality are regarded as broad aspects of individual differences among people. The personality traits account for individual consistency and continuity of behavior, thoughts, and feelings pertaining to situations and experiences over time (Zhao & Seibert, 2006). The five factors allow researchers to organize a variety of personality variables into a small but meaningful set of personality constructs and search for consistent and meaningful relationships (Zhao & Seibert, 2006). Based on the five factor personality dimensions an approximate outline of individuals can be determined along with the way in which they express themselves or respond to situations (John, & Srivastava, 1999; McCrae & Costa, 2007). The five factor model allows the organization of personality traits into a coherent story that can assist in the search for meaningful relationships (John, & Srivastava, 1999; McCrae & Costa, 2007; Pervin & John, 1999).

Various research studies have supported the proposal that the five factor model of Openness, Conscientiousness, Extraversion, Agreeableness, and Neuroticism, (OCEAN) provides a comprehensive taxonomy of personality (Costa & McCrae, 2000; Thalmayer, Saucier & Eigenhuis, 2011; Smits, Dolan, Vorst, Wicherts, & Timmerman, 2011; Zhao & Seibert, 2006). Goldberg (1990) suggested that according to consensus the five-factor model of personality can be used to describe the most salient aspects of personality. In addition, the reliability of the five-

factor structure in cross-cultural generalizability has been established through research in many countries (Judge, et al., 2002b; McCrae & Costa, 1997). Finally, Costa and McCrae (1988) and Digman, (1989) noted that the Big Five factors are heritable and stable over time. Following is an analysis of each of the five dimensions of the BFI.

Openness to Experience. This personality dimension characterizes the inclination of an individual to be curious, imaginative, creative, artistic, tolerant of ambiguity, and exploratory; generally the individual is able to adjust to new experiences and ideas (Howard & Howard, 1995; McCrae & Costa, 2007; Srivastava, John, Gosling, & Potter, 2003; Sutin & Costa, 2010). Individuals who display high levels of openness are intellectually curious, open-minded about their situations, and are attracted to the interests they pursue in depth (Howard & Howard, 1995; Srivastava et al., 2003; Sutin & Costa, 2010). Individuals who are open to experiences are less likely to become frustrated with work situations because they are identified by a need for exploration and innovation (Howard & Howard, 1995; Srivastava et al., 2003) . According to Judge and colleagues (2002a), Openness to Experience had one of the most consistent correlates to leadership; although this is controversial because the dimension has not been related to leadership in business settings (Judge et al., 2002b).

Conscientiousness. This personality dimension describes the level to which an individual is dependable, organized, responsible, and achievement oriented (Costa & McCrae, 1991; Howard & Howard, 1995; Srivastava et al., 2003). Conscientiousness has been associated with a profile of a focused individual who is capable of problem solving coping, self-discipline, achievement striving, dutifulness, and competence (Howard & Howard, 1995; Lim & Ployhart, 2004). Individuals who are high in conscientiousness are also flexible, an attribute which can cause distraction and a more hedonistic approach to goal achievement. Nevertheless, flexibility

also facilitates creativity and openness to possibilities (Howard & Howard, 1995). Moreover, individuals high on conscientiousness also tend to be reliable, hardworking, purposeful and careful (Howard & Howard, 1995; Srivastava et al., 2003). A dedication of a conscientious individual to balance of self-discipline and persistence can assist in completing tasks and enhance goal accomplishment with commitment (Howard & Howard, 1995; Lim & Ployhart, 2004). Camps, Stouten, and Euwema (2016) found also that supervisors with high conscientiousness were more likely to be perceived as an abusive supervisor by their employees.

Extraversion. This is a personality dimension that refers to the number of relationship an individual is comfortable maintaining (Howard & Howard, 1995; Sutin & Costa, 2010). Costa McCrae (1991) suggested six facets of extraversion that include gregariousness, warmth, assertiveness, excitement seeking, active, and positive emotions. Research has indicated that individuals with high levels of extraversion are more ready to engage in social activities, have higher levels of energy, and positivity (Srivastava et al., 2003). Extraverts are more likely be optimists about their work performance and exert more leadership while being more outgoing and friendly (Howard & Howard, 1995; Zhao & Seibert, 2006). Furthermore, extraversion is the most consistent correlate of leadership across study settings and criteria (Judge et al., 2002b). Findings by Soto, John, Gosling, and Potter, (2011) suggested that extraversion is reduced with age especially during late adulthood.

Agreeableness. This personality dimension refers to the number of sources from which an individual takes norms, which eventually result in a socially acceptable behavior. It describes an individual who complies to many norm sources depending on the environment and the situation (Howard & Howard, 1995; Zhao & Seibert, 2006). Agreeableness is also the dimension associated with warm, supportive and good-natured, and are characterized as trusting,

forgiving, caring, soft-hearted, and gullible. Individuals high in agreeableness value positive interpersonal relationships, and cooperative work environments (Soto et al., 2011; Zhao & Seibert, 2006). In addition, individuals who display high levels of agreeableness may be viewed as caring, trusting, cooperative and sympathetic to others, but on the other end of the continuum may be only concerned about exercising power (Howard & Howard, 1995; Soto et al., 2011; Zhao & Seibert, 2006). Research has indicated that agreeableness in increases with age (Soto et al., 2011).

Neuroticism. The personality dimension of Neuroticism is categorized as the Negative Emotionality Factor (Costa & McCrae, 1992; McCrae, R.R., 1999; Soto et al., 2011). Neuroticism is related to negative emotions such as pessimistic attitudes, low self-esteem, extreme self-consciousness, anxiety and depression (Howard & Howard, 1995). Individuals characterized by neuroticism are bothered by a variety of stimuli that do not need to be strong to bother them (Howard & Howard, 1995; Srivastava et al., 2003; Sutin & Costa, 2010). Costa and McCrae (1992) identified six facets that relate to neurotisism and they include worry, anger, discouragement, self-consciousness, impulsiveness, and vulnerability. Neuroticism has been found to decrease in middle to late adulthood (Soto et al., 2011), and that neuroticism has been the trait most closely associated with burnout, negative emotions, and emotional instability (Bakker, Van Der Zee, Lewig, & Dollard, 2006).

Criticism of the BFI

Until the completion of taxonomy of the personality and theory (Pervin & John, 1999) an important weakness of the BFI as a research tool has been its lack of taxonomy of the five personality dimensions (Barrick & Mount, 1991; Eysenck, 1992; Tupes & Cristal 1961). Before the taxonomy of personality traits was assessed, attempts to compare research results on similar

studies were largely ineffective because of the difficulty to determine whether variables were similar from one study to another (Cuthcin, 1998).

Another recent criticism was by Gurven, Rueden, Massenkoff, Kaplan, and Vie (2013) who used the BFI while researching an illiterate indigenous community in the Bolivian Amazon. The results indicated that the personality traits of the group did not cluster under the usual Big Five dimensions. Specifically, the researchers argued that only two clusters were found and that those were not falling under the Big Five (Gurven et al., 2013). A possible explanation for the lack of the universality of the survey tool was the disposition of a hunting and gathering society that relies on different traits to be successful in their particular environment (McCrae and Terracciano, 2005). McCrae (2013) further noted that the abstract nature of the questions due to translation may have been a factor for the failure of the Big Five.

Gullo, Loxton, and Dawe (2014) used the BFI in populations with addictions. The authors suggested that the understanding of impulsivity of the addicted populations may pause particular parameters (e.g. negative urgency related to substance use) that inhibit the use of the tool. Moreover, the authors noted that the delineation of specific neurocognitive pathways from each facet may be result of addictive behaviors. Another explanation could include the need for additional facets (Gullo et al., 2014). It must be noted that the recent studies' critical evaluations of the Big Five were based on particular and distinctive parameters (i.e., illiterate society and addictive population) which presented unique characteristics that may have restricted the identification of personality factors through the tool.

Summary of the Big Five Inventory

This section presented a theoretical analysis of the Big Five Inventory (BFI) (John & Srivastava, 1999), which is based on the Five Factor Model (FFM) of personality traits (Costa &

McCrae, 2007). The Five Factor Model (FFM) is a extensively accepted construct labeling personality variation along five dimensions (i.e., the Big Five): Extraversion, Openness, Conscientiousness, Neuroticism, and Agreeableness (Gurven, Rueden, Massenkoff, Kaplan, & Vie, 2013). The Big Five model is the foundation for the BFI survey tool (John & Srivastava, 1999; McCrae & Costa, 2007). According to Gurven and colleagues (2013), numerous researchers have argued that the structure of the FFM is a "biologically based human universal" (p. 354) that surpasses language barriers and other cultural differences (Bouchard & Loehlin, 2001; McCrae & Costa, 1997; Wiggins & Trapnell, 1997; Yamagata et al., 2006). The indication of a universal structure suggests uniform covariance among traits in humans despite vast differences sourcing from culture, history, economy, social life, ideology, and any form of cultural and behavioral expression (Gurven et al., 2013). The Big Five is even distinguished in captive chimpanzees, based on ratings by zoo employees (King & Figueredo, 1997; Weiss, King, & Hopkins, 2007). The section also presented empirical literature findings of studies using BFI in the law enforcement (Mirable, 2008; Reaves & Hickman, 2004; Sanders, 2008) as well as criticism of the survey with an analogous analysis of the particular studies (Barrick & Mount, 1991; Eysenck, 1992; Glaxo et al., 2014; Gurven et al., 2013; Tupes & Cristal 1961). Following is a summary of chapter two.

Summary of Literature

Limited research has been conducted on the issue of law enforcement officers' leadership practices (Haberfeld, 2008; Paoline at al., 2000; Steinheider & Wuestewald, 2008) and the role of trust among the law enforcement officers (Ambrose & Schimke, 2003; Sykes, 2014; Van Graen, 2016). There is also limited research on low rank and patrol law enforcement leadership (Cockcroft, 2014; Moggré et al., 2017; Vito & Higgins, 2010;Vito, Vito, & Higgins, 2014),

ambiguous research on personality traits of law enforcement officers and their role to community leadership practices (Laguna, et al., 2010), scarce research on the five factors and possible relations to trust (Mooradian et al., 2006), and possible associations with leadership practices, and trust (Ambrose & Schimke, 2003; Anderson, Gisborne, & Holliday, 2006; Haberfeld, 2006; Van Graen, 2016).

This chapter provided a description of distinctive aspects of police leadership and community policing roles. It also reviewed studies in leadership, trust, personality, and the relationships that originated from the findings. It further provided an analysis of the elements associated with police occupational environment and effect police officers. In addition, it identified specific areas of community policing that can enhance the relationship between the police and community members, and assist police officers in their leadership practices (Fielding & Innes, 2006; Heffernan, 2003; Mastrofski, et al., 1995).

This chapter also presented a theoretical perspective of the Leadership Practices Inventory (LPI) (Kouzes & Posner, 2012), the General Trust Scale (GTS) (Yamagishi & Yamagishi, 1994) and the Big Five Inventory (BFI) (John & Srivastava, 1999) survey instruments. A breakdown of each of the components of the instruments was also incorporated in this section along with the reasons the particular surveys were deemed appropriate for the current study. Following is chapter three of the study, which will provide a methodology of this research, the design of the study, a description of the population, and instrumentation and data collection procedures.

CHAPTER THREE-METHODOLOGY

The purpose this study was to explore relationships among self-reported leadership behaviors, trust, and personality dimensions of law enforcement officers for three different police departments in a city in the Western United States. The Leadership Practices Inventory (LPI) was used to assess the leadership practices and the General Trust Scale (GTS) to assess trust. In addition, the study investigated possible differences across groupings established by the self-assessed personality traits using the Big Five Inventory (BFI). The study also investigated differences across groups established by selected demographic variables (e.g. gender, rank, and department). To accomplish the study, traditional univariate and multivariate techniques statistical techniques, including Multivariate Analysis (MANOVA), Analysis of Variance (ANOVA), and Tukey's Honest Significance Difference (Tukey's HSD) tests, were used.

This chapter provides a description of the methodology of the current study. The following sections presents research questions, research design, research participants, jurisdiction area demographics, instrumentation, data collection, data analysis, and a summary of the methodology.

Research Questions

This research study was guided by the following research questions:

1. When groups are established by selected demographic variables, are there differences in group based self-reported leadership practices and trust?
    a. Are there differences in self-reported leadership practices and trust between police and sheriff departments?
    b. Are there differences in self-reported leadership practices and trust between male and female law enforcement officers?

c. Are there differences in self-reported leadership practices and trust between ranked and unranked law enforcement officers?

d. Are there differences in self-reported leadership practices and trust between law enforcement officers who worked one to 10 years, and those who worked over 10 years?

e. Are there differences in self-reported leadership practices and trust between law enforcement officers who graduated from high school and those who graduated from college?

f. Are there differences in self-reported leadership practices and trust between law enforcement officers who did not have military training and those who had military training?

g. Are there differences in self-reported leadership practices and trust between law enforcement officers who are not married or are divorced and those who are married?

2. When groups are established by selected personality traits, are there differences in leadership practices and trust?

    a. Are there differences in self-reported leadership practices and trust when grouped by extraversion?

    b. Are there differences in self-reported leadership practices and trust when grouped by agreeableness?

    c. Are there differences in self-reported leadership practices and trust when grouped by conscientiousness?

d. Are there differences in self-reported leadership practices and trust when grouped by neuroticism?
e. Are there differences in self-reported leadership practices and trust when grouped by openness?

Research Design

This study used a survey design method. According to Gall, Borg, and Gall (2003), survey research involves the use of a questionnaire(s) to "collect data from a sample that has been selected to represent a population to which the findings of the data analysis can be generalized" (p. 226). Creswell and Poth (2016) explained that surveys are most suitable to assess trends or characteristics of a population because they can assist in the understanding of individual attitudes, opinions, beliefs, and practices. Furthermore, surveys can evaluate the success or effectiveness of a program or identify the needs of a community (Creswell & Poth, 2016).

The current study utilized three existing quantitative research surveys to study the relationships between individual's leadership practices, trust, and selected personality dimensions of law enforcement personnel. Thus, the data for the study were drawn from participants' self-assessments as measured by the LPI, Trust, and the BFI survey instruments.

Research Participants

Using specific inclusion criteria, law enforcement officers from three different law enforcement departments were invited to participate. Participant inclusion criteria included: completion of basic training; a minimum of six months employment in one of the three participating police departments; part-time or full-time employment; being a fully sworn police

officers. Research participants included patrol officers, traffic officers, events and intelligence officers, regional operations officers, services, and administrative services officers.

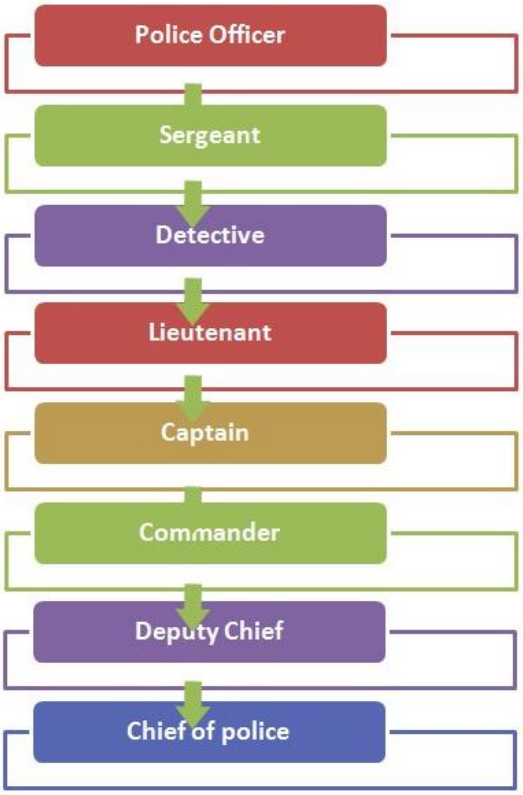
The three law enforcement departments, one sheriff and two police, were located in one county in the mountain western U.S. Each department provided a different social, geographic, and economic setting within the county. The study included a sheriff's department. Although the separation and distinction between these agencies includes different jurisdiction, qualifications, and training (e.g., jail warden duties, county jurisdiction, and special rural area training) (Compton, Broussard, Reed, Crisafio & Watson, 2015; Shafer, 2010) it was deemed appropriate to include the sheriff's department in the study and investigate possible differences. Additionally, McCarty and Dewald (2016) suggested that the most substantial difference between sheriff's offices and municipal police departments is how the head of the organization is selected. The sheriff is generally elected and is the highest law enforcement officer of a county, whereas the Police Chief is appointed by the city (i.e., city mayor, city manager, and city council) (NSA, 2016). Subsequently, it has been argued that the sheriff's personnel are more attuned to the sentiments of the community and subject to the power of public opinion because county residents are constituents that have the power to vote the sheriff out of office, usually after two to four-year terms (Falcone and Wells, 1995; Kuhns, Maguire, & Cox 2007; Weisheit, Falcone, & Wells, 2006).

All departments in this study used the same traditional rank system, which is based on a quasi-militaristic structure. The system of identification is an insignia based uniform system, similar to that of the US Army and Marine Corps; the system is used to help identify an officer's seniority. In addition, each department has a basic structure of a chief of police and assistant chief and ranks dependent on the respective number of law enforcement personnel.

At the time of the study, the total number of law enforcement officers within the three departments is approximately 550. The first law enforcement department (sheriff's department) employs 410 law enforcement officers, the second approximately 110 police officers and the third police department approximately 30 police officers. The typical rank structure of the police departments represented in this study is depicted in Figure *2*.

Figure 2

*Police Department Rank Structure**

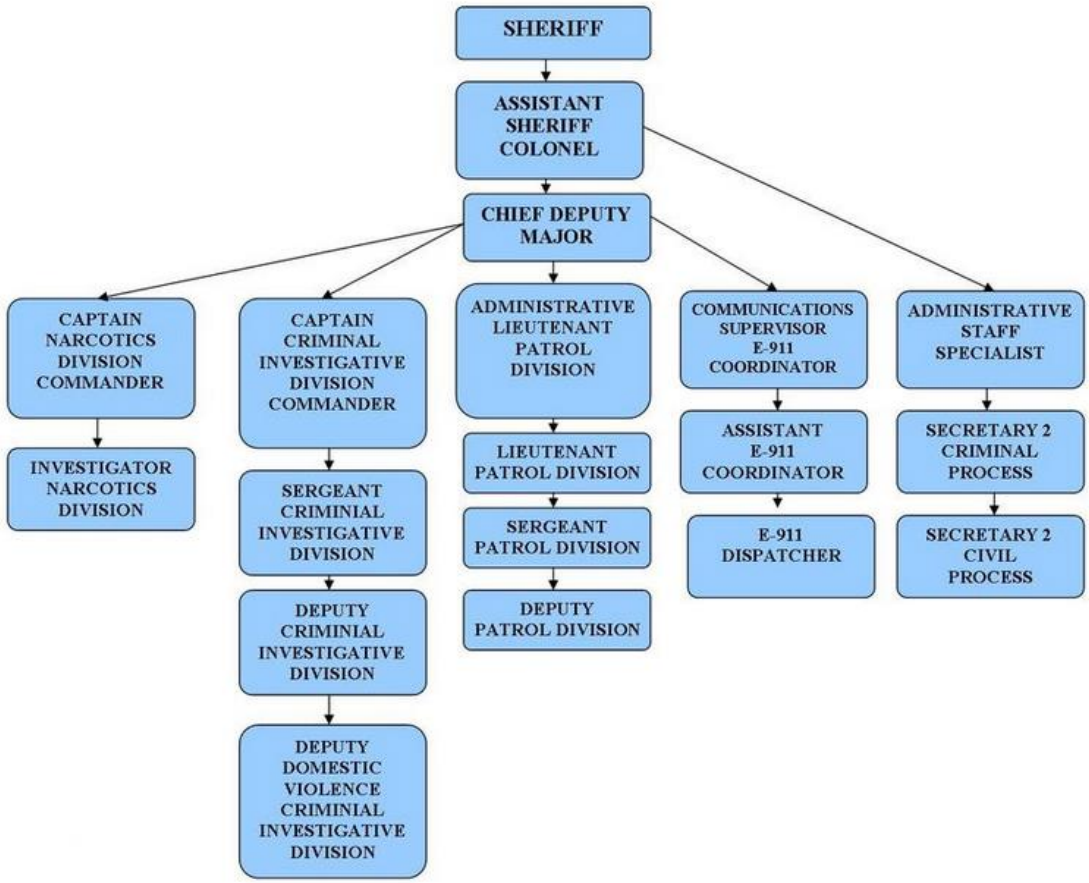


*(www.hierarchystructure.com)

The sheriff's department under investigation was organized in the typical structure of sheriff departments ranking organogram. The typical ranking structure of the sheriff's department is depicted on Figure *3*.

Figure 3

*Sheriff Department Rank Structure**



** (www.hierarchystructure.com)*

All the law enforcement departments represented in this study were in an urban setting; the number of ranked officers in all three departments was approximately 130 and the number of non-ranked officers was approximately 420. The average ratio of ranked to unraked law enforcement officers was approximately one to four.

Jurisdiction Area Demographics. In general terms, the population of the citizens residing in the area of jurisdiction for the study is approximately 350,000, includes

approximately 110 square miles, and has 3.1 law enforcement officers per 1,000 citizens. The national average is 2.9 per 1000 citizens (FBI, 2018). Although an increase of crime has been recorded since 2014, the overall satisfaction level for the three departments evaluated by the residents was 83% according to the 2016 community satisfaction survey (PD, 2016). The area of jurisdiction of the three participating police departments is not restricted in cases of crime or assistance (i.e., joint jurisdiction in each other's area during crisis).

Instrumentation

The survey for this research study is comprised of four parts: Leadership Practices Inventory (LPI), a General Trust Scale (GTS) and the Big Five Inventory (BFI), and the demographic questions. The LPI Self-assessment measures the self-perceptions of leadership practices. The GTS assesses the self-perceptions of trust. The BFI measures selected personality dimensions. The responses to the LPI, Trust, and BFI which are all Likert-style questions that measure the perceptions of participants.

Leadership Practices Inventory (LPI)

The LPI was developed by Kouzes and Posner (1988) and was updated by the authors in 2003, 2007, and 2012 (Appendix A). According to Kouzes and Posner (1988), and Pfiffer (2012), the LPI has been utilized by over 3 million people globally. The LPI measures *five exemplary practices* performed by leaders of organizations (Kouzes & Posner, 2012). The LPI five practices are (a) Model the Way, (b) Inspire a Shared Vision, (c) Challenge the Process, (d) Enable Others to Act, and (e) Encourage the Heart. The instrument includes a total of 30 items, six statements per practice. Each statement is evaluated by the participant on a 10- point Likert scale: (1) Almost Never, (2) Rarely, (3) Seldom, (4) Once in a While, (5) Occasionally, (6)

Sometimes, (7) Fairly Often, (8) Usually, (9) Very Frequently, and (10) Almost Always (Kouzes & Posner, 2013).

Reliability. Reliability of a survey instrument is a measure of its consistency and stability over time (Condon & Clifford, 2012); that is, the reliability provides an indication about repeatability of a score of an instrument (Posner, 2016). Specifically, an instrument (assessment, survey, questionnaire, etc.) with high reliability would be expected to give the same result repeatedly; assuming that what was being measured is not changing (Posner, 2016). Reliability is a characteristic of a measure taken across individuals and does not speak to the reliability (consistency) of an individual score. Reliability score above 0.60 is considered strong, and above 0.80 to be very strong (DeVellis, 2011). One measure of reliability is Cronbach's coefficient alpha, which provides a measure of internal consistency within the subscales. Instruments are judged more reliable as assessment errors decrease, and instruments are considered statistically reliable when Cronbach's coefficient alpha of Reliability is 0.60 or greater, with the maximum value of 1.0 (Kouzes & Posner, 2002).

The LPI is considered reliable across all five subscales with a Cronbach's alpha coefficient of 0.75 or higher. Table 2 summarizes the coefficients of reliability for all subscales of the LPI provided by Kouzes and Posner (2002). In examining the reliability of select demographics across the subscales of the LPI, Kouzes and Posner (2002) and Posner (2016) reported that there are no significant differences in reliability score among male and female leaders. Likewise, the authors found no differences in reliability between leaders public and private organizations, leaders with varying ethnic or cultural backgrounds, or those practicing across differing disciplines such as customer service, finance, informational technology, manufacturing and marketing (Kouzes & Posner, 2012; Posner, 2016). In summary, the LPI has

been found to be quite robust across a very wide range of sample populations with high internal reliability.

Table 2

Cronbach's Alpha Coefficient of Reliability for each subscale of the LPI

LPI Practice	Self	Observers (All)	Items on Subscale
Model	0.77	0.88	6
Inspire	0.87	0.92	6
Challenge	0.80	0.89	6
Enable	0.75	0.88	6
Encourage	0.87	0.92	6

Source: Kouzes & Posner (2002)

Validity. Instruments are considered valid when they measure what was intended (Condon & Clifford, 2012; Posner, 2016). There are three types of validity: face validity, construct validity, and predictive validity. Face validity considers whether, based on subjective evaluation, an instrument appears to measure what it intends to be measuring. Construct validity is determined empirically (objectively) using factor analysis to assess the extent to which the instrument items measure common or different content areas. According to Posner (2016), the LPI provides credible measures of The Five Practices of Exemplary Leadership and results have been documented valid at personal, interpersonal, small group, and organizational levels. The validity of the instrument was verified while using both the LPI normative database, as well as reviewing relevant findings of several hundred studies conducted worldwide with nearly 2.8 million respondents (Posner, 2016). Posner (2016) noted that after the investigation of the essential psychometric properties of the LPI, the instrument proved to be a valid assessment of individuals' leadership behaviors.

Kouzes and Posner (2002) noted that the results of the instrument must reflect the constructs being assessed. Therefore, a valid instrument reports scores that have meaning or use

for the respondent (Kouzes & Posner, 2002; Posner, 2016). The most important practical matter to participants (individuals and their organizations), is whether the LPI scores are significantly related to other critical behavioral (individual and organizational) performance measures (Posner, 2016), which is referred to as *predictive* validity. Researchers estimating a correlated factors model corresponding to the oblique factor rotation, modified to reflect the inter-correlations among the error items for the LPI items that had correlations with other items exceeding 0.50, which resulted in a confirmatory model with acceptable fit (Chi-Square = 399.9, $df = 363$, $p < 0.09$) (Herold, Fields, & Hyatt, 1993). The five factors consistent with the five subscales of the LPI were established and it was shown that leadership scores were consistently associated with important aspects of managerial and organizational effectiveness, such as workgroup performance, team cohesiveness, commitment, satisfaction, and credibility. The result of this analysis (Herold et al., 1993) in agreement with research conducted for validity assessment of the instrument (Condon & Clifford, 2012; Kouzes & Posner, 2002; Posner, 2016) indicated the LPI had validity. Finally, it must be emphasized that Kouzes and Posner (2002), and Posner (2016) established validity through repeated application across many groups over many years. Additionally, Vito and Higgins (2010) validated the instrument as an assessment of police leadership performance.

Trust Scale

The central importance of interpersonal trust in leadership has been researched in different professional domains and organizational environments (Carr & Maxwell, 2018; Das, Echambadi, & Mccardle, 2003; Schoorman, Mayer, & Davis, 2007). To assess trust the General Trust Scale (GTS) was utilized, which was developed by Yamagishi's and Yamagishi (1994). The GTS consists of the six items, measured in a five-Likert scale (Gheorghiou, M., Vignoles,

V., & Smith, 2009; Kramer, 1999; Levi & Stoker, 2000; Yamagishi & Yamagishi, 1994). The GTS questions are presented in Table 3.

Table 3

General Trust Scale Questions

Questions
1) Most people are basically honest.
2) Most people are trustworthy.
3) Most people are basically good and kind.
4) Most people are trustful of others.
5) I am trustful.
6) Most people will respond in kind when they are trusted by others.

Source: Yamagishi & Yamagishi (1994)

The GTS measures beliefs about honesty, and trustworthiness of others in general (Yamagishi & Yamagishi, 1994). Specifically, Yamagishi and Yamagishi noted that one unique feature of their theory was that it is a theory of trustfulness rather than trustworthiness of a person. Practically, the authors' dimension of trust comprised of the *knowledge-based trust* and *cognitive bias generalized trust.* The authors suggested that people usually perceive a general based trust limited to particular objects (people or organizations) and a general trust is the belief in the benevolence of human nature and therefore, not limited to particular objects. This study obtained an overall trust score by totaling scores for all the items as reported by Yamagishi, Cook and Watabe (1998).

Reliability. The six-item instrument developed by Yamagishi and Yamagishi (1994) proved reliable in the cross cultural study using two different sub-samples (i.e., general population and students). Yamagishi and Yamagishi (1994) reported reliability ranging from 0.70 to 0.78. in studies conducted in Japan and the US. The GTS also proved consistent by producing cross-national differences.

Montoro, and colleagues (2014) reported that the adaptation of the GTS in Spanish produced satisfactory psychometric properties and specifically a reliability Cronbach's alpha of 0.86. The authors argued that results exhibited an internal cosistency higher than those of the developers (Yamagishi & Yamagishi, 1994). Item Response Theory (IRT) exhibited that all items displayed high discrimination parameters demonstrating a capacity to show increasing response options as a function of increasing levels of trust. Item Response Theory is crucial because it fucions as the extension of the concept of reliability because reliability refers the the precision of a measurement (i.e., the degree of a free of error measurement) (Montoro et al., 2014).

Gheorghiou and colleagues (2009) tested Yamagishi's (1994) theory by measuring trust in 31 countries and produced Cronbach's alphas ranging from .55 to .82 with a mean of .70, which supported the reliability of the instrument (Table 4). The authors noted that to determine whether the same structure replicated at the nation level, individuals' responses to each of the scale's items were combined within each country and then factor analyzed. The results replicated the individual-level solution and produced a Cronbach's alpha of 0.97.

Table 4

Cronbach's Alpha Coefficient of Reliability for four Subsamples of the GTS

	Japan		U.S.		
	Students	General	Students	General	Items on Scale
General Trust	0.76	0.70	0.72	0.78	6

Source: Yamagishi & Yamagishi (1994)

Validity. Yamagishi and Yamagishi (1994) noted that the GTS has been proven valid at measuring generilized trust in an interpersonal level, as well as in comparisons with other instruments that measured caution, knowledge based trust, utility of relations, reputation, and

honesty (Yamagishi & Yamagishi, 1994). This is consistent with previous findings of similar studies using the scale (Yamagishi & Yamagishi, 1989; Yamagishi, 1988).

Gheorghiou and colleagues (2009) conducted a study testing the validity of the GTS using data from 31 nations. Besides establishing reliability in their study by conducting a separate factor analyses in every country, the authors suggested that validity of the scale in homogeneous populations was evident. Naef and Schupp (2009) reported that the GTS questions were sensitive and valid for homogeneous populations. In addition, the validity of the GTS was shown to be critical in facilitating research on trust by potentially allowing more consistency in measurement of trust and by ultimately providing the ability for key comparisons on trust (Jasielska, Rogoza, Zajenkowska, & Russa, 2019). Consequently, Jasielska et al., (2019) indicated that the GTS provided evidence of external validity as well as structural, covergent, discriminant, and concurrent validity via association with personality traits, particulraly Agreeableness. Finally, Morono and colleagues indicated that Item Response Theory (IRT) verified the valitdity of GTS.

Assessment of Personality Characteristics

The Big Five Inventory (BFI) was used to assess personality traits. The BFI was developed by John and Srivastava in the 1980s as a forty-four-item instrument for measuring Openness to Experience, Conscientiousness, Extraversion, Agreeableness, and Neuroticism (Maylor, 2017; Rammstedt & John, 2007). The BFI is a self-assessment multiple-choice survey sensitive to self-awareness, which can contribute to better understanding of personality (Goldberg, 1990). The instrument measures each dimension using multiple facets including, including ideas, competence, positive emotions, altruism, anxiety, and hostility (see Table 5).

Table 5

Personality traits of the Big Five Inventory

Dimensions	Facet (and correlate trait adjective)
Openness to Experience	Ideas, fantasy, aesthetics, actions, feelings, values
Conscientiousness	Competence, order, dutifulness, achievement, striving, self-discipline, deliberation
Extraversion	Gregariousness, assertiveness, activity, excitement-seeking, positive emotions, warmth
Agreeableness	Trust, straightforwardness, altruism, compliance, modesty, tender-mindedness
Neuroticism	Anxiety, angry hostility, depression, self-consciousness, impulsiveness, vulnerability

Source: Designed by the author

Each dimension is associated with eight to ten statements with a total of 44 items (see Appendix C). A five-point Likert scale is used for each statement: (1) Disagree strongly (2) Disagree a little, (3) Neither agree or disagree, (4) Agree a little and (5) Agree strongly (John & Srivastava, 1999).

Reliability. In a research study that included 463 undergraduate students, John and Srivastava (1999) compared the reliability of the Big Five Inventory to the NEO-Five Factor Inventory (NEO-FFI) and the Trait Descriptive Adjective (TDA). The coefficient alpha reliability mean for the BFI to was .83. The authors noted that across all instruments Extraversion, Conscientiousness and Neuroticism where measured most reliably, whereas Agreeableness and Openness were less reliable. Hee (2014) reported the BFI to be reliable, with reliability alphas ranging from .74 to .90 and .72 to .78 respectively.

The BFI is considered to be reliable across all five subscales with a Cronbach's alpha coefficient of 0.79 or higher. Giberson, et al. (2009) found that the Big Five personality inventory had "acceptable internal consistency reliabilities which were reported for each of the

scales, with alphas ranging from 0.79 to 0.87" (p. 130). Table 6 summarizes the coefficients of reliability for all subscales of the BFI.

Table 6

Cronbach's Alpha Coefficient of Reliability for each subscale of the BFI

Instrument	BFI-Self	Items on Subscale
Openness to Experience	0.81	10
Conscientiousness	0.82	9
Extraversion	0.88	8
Agreeableness	0.79	9
Neurotisism	0.84	8

Source: Pervin & John (1999)

Validity. External validation is a method for establishing a validity, which refers to the approximate truth of conclusions the involve generalizations (Randolph & Myers, 2013). In a cross-instrument convergent study by John and Srivastava (1999), convergence validity correlations across instruments was .75. Convergent validity refers to the degree to which two instruments measure the identical constructs or they are highly correlated (Thoma, Cook, McGrew, King, Pulphisher,…& Campbell, 2018). Convergence research is a means of solving complex research problems, focusing on societal needs (NSF, 2018). Convergence studies entail knowledge, methods, and expertise from different disciplines, to form innovative frameworks to address multidisciplinary research questions. John and Srivastava (1999) found that BFI and TDA showed a strong convergence (mean r = .89). The researchers concluded that the studies conducted using the BFI are easily combined with other big five facet models; consequently, the BFI is a useful tool for studies that require a brief measure (Maylor, 2007).

In 2008, John, Naumann, and Soto examined the particular parameters of the BFI such as the history, measurement, and constructs (i.e., trait adjectives) such as modesty, compliance, altruism, assertiveness etc. In addition to the instruments (i.e., BFI, NEO FFI and TDA) of the

previous convergent study (John & Srivastava, 1999), the researchers used the NEO Personality Inventory (NEO-P-I) and reported that the BFI provided an integrative taxonomy for personality research (John et al., 2008). Additionally, the authors emphasized that the instrument offered a sound validated tool to operationalize personality domains. The BFI has been used to relate members of teams with team processes and effectiveness (Howard & Howard, 1995), personality with job satisfaction (Barrick, Mount, & Judge, 1998), CEO's to organizational values (Giberson, Resick, Dickson, Mitchelson, Randall, & Clark, 2009), and organizational values to the success of knowledge management system implementations (Judge, Heller, & Mount, 2002).

Demographic Variables

In addition, the survey contains a section on demographic variables that were used to record the participants' department of employment, gender (male and female), years in the force (0-5, 6-10, 11-20, above 20), level of education (HS graduate/GED, trade/technical/vocational training, college graduate, graduate studies), rank (officer, higher rank), military service (N/A, 2-4, 5-6, above 7), and marital status (single/never married, married/domestic partnership, widowed, divorced, and separated). The study included these demographic variables because they have been used in previous research studies (e.g. Shafer, 2009, 2010a; Zhao, Thurman, & He, 1999). Additionally, these demographic variables were selected because other law enforcement studies indicated that these demographic variables were associated with significant findings (e.g., gender differences in relational and physical aggression, differences due to experience, education etc.) (Burton, Hafetz, Henninger, & Debra, 2007; Carlson, Thayer, & Germann, 1971; Carr & Maxwell, 2018; McDaniel, Hunter, &

Schimdt, 1988; Molinaro, 1997; Paoline & Terril, 2007; Wright, Dai, & Greenbeck, 2010). Five of the groups (i.e., department of employment, years in law enforcement, level of

education, military service, and marital status) for the demographic variables were transformed because the frequencies were too low or the number of participants for each group was small (e.g., years in the force instead of 0-5 became 0-10) to increase the frequency or relative frequency of a given group and the number of participants within the groups (Sprinthall, 2012). Frequency distributions can show either the actual number of observations falling in each range or the percentage of observations (i.e., relative frequency distribution) (Sprinthall, 2012). The part of the survey that includes demographic variables is found in Appendix E**.**

Procedures and Data Collection

The study was conducted under the auspices of the University of Nevada, Reno Institutional Review Board (IRB) (see Appendix H). After approvals were obtained from the IRB and the participating law enforcement departments, an introductory e-mail was sent to each participating department containing a letter (see Appendix I) describing the study, the survey tools, and an information sheet (see Appendix J). Each of the participating law enforcement departments was subsequently contacted by e-mail to request an appointment for the purpose of explaining the study in person and to set up a time during a regularly scheduled briefing for recruitment of law enforcement officers and data collection.

The information for participation was provided both verbally (e.g., onsite) and through the information sheet provided either onsite or online for those that were not present during the briefings. Law enforcement officers were recruited through onsite introductions (in person) by the investigator and via email through the law enforcement departments server by their secretary. Efforts were not made to alter or optimize the diversity of the study sample. Participants were informed that their participation was voluntary, and they were not obligated to complete the survey. Potential subjects were automatically excluded if they did not meet the criteria for the

operational definition of police officer. For example, trainees were not included in the study. This was to ensure that participants completed all required job-related training and had been performing daily job functions for at least three months.

Participants used on site paper documents an online link that was provided via email, or via an information note provided onsite This link directed the participants to a password-protected Survey Monkey account. To ensure confidentiality and anonymity, the IP addresses of the respondents were not collected. The Survey Monkey link directly guided the participants to an information sheet that served as consent form. The information sheet (Appendix D) described the study and procedures, confidentiality, time involvement, benefits, risks, the voluntary nature of participation, and contact information for the principal investigator along with the IRB number and expiration date. Participants provided consent to participate by clicking "I consent to participate."

All data collection materials (i.e., paper documents) were stored in a locked drawer in a secure location. Only the researcher and dissertation advisor from the University of Nevada, Reno has the permission to access the participants' assessments. The primary investigator will maintain the anonymity and confidentiality of the subjects. The consent forms were placed in a separate locked cabinet in a secure location. The raw data collected were imported from an Excel spreadsheet into the Statistical Package for the Social Sciences (SPSS). To examine the data statistical analyses were used and applied with the SPSS software.

Data Analysis

The research data for this study were collected through the survey tools LPI, BFI, GTS and demographic questions. Once the data were inspected of an adequate number of respondents (i.e., 157), data were first uploaded from Survey Monkey to Excel and transferred to Statistical

Package for the Social Sciences (SPSS). The statistical analyses were accomplished with the use of the IBM SPSS. Descriptive statistics were computed, and data were analyzed. The results of this study were limited to law enforcement officers and the degree to which they can be generalized is unknown.

Descriptive Statistics

For each of the LPI subscales, the GTS, and each of the BFI subscales, the mean, range, and standard deviation were computed. The percentages and frequencies of each of the demographic variables were calculated. Relationships for which variables were computed by correlation statistics as a form of descriptive statistics.

The Pearson Product Moment correlation coefficients *(r)* can take a range of values from +1 to -1. A value of zero indicates that there is no association between the two variables. A significant value greater than zero indicates a positive association which means that as the value of one variable increases, so does the value of the other variable (Mertler & Vannata-Reinhart, 2017). "Correlation coefficients reveal the magnitude and direction of relationships. The magnitude is the degree to which variables move in unison or opposition...the coefficient's sign signifies the direction of the relationship" (Cooper & Schindler, 2006, p. 536). The correlation coefficient (*r)* measures the strength and direction of a linear relationship between two variables on a scatterplot. A perfect downhill (negative) linear relationship would be indicated by a value of -1.0 and a perfect positive relationship would be indicated by a + 1.0.

For this study, a statistical significance of the correlation is indicated by a probability value of less than 0.05. This means that the probability of obtaining such a correlation coefficient by chance is less than five times out of 100, so the result indicates the presence of a significant relationship. A value of –0.70 describes strong downhill (negative) linear relationship. In reverse,

a + 0.70 defines a positive uphill linear relationship. Although, statistically significance in a correlation (*r*) may occur between – 0.50 and + .050, such relationships are not necessarily meaningful (Bishara & James, 2012; Mertler & Vannata-Reinheirt, 2017). The level of significance of a specific value of r is a function of the number of observations; that is, as the number of observations increase the critical value of r for significance decreases. For this study, a value of .70 or greater was judged as meaningful.

Multivariate Analysis of Variance (MANOVA). The current study conducted a series of MANOVA tests. The MANOVA was utilized to simultaneously examine group differences based on two or more related dependent variables while controlling for the correlations among the dependent variables (Mertler & Vannatta-Reinhart, 2017; Stevens; 2002; Vogt, 2005). A clear advantage of MANOVA over ANOVA is the inclusion of multiple dependent variables to provide holistic comparison of groups; MANOVA provides one statistic to compare the groups using all dependent variables. In contrast, ANOVA compares the groups using only one dependent variable; thus, multiple ANOVAs would be required when multiple dependent variables are considered. Stevens (2002) explained that MANOVA should be used when comparing groups based on differing characteristics or multiple variables. Mertler and Vannatta-Reinhart (2017) explained that MANOVA was appropriate when:

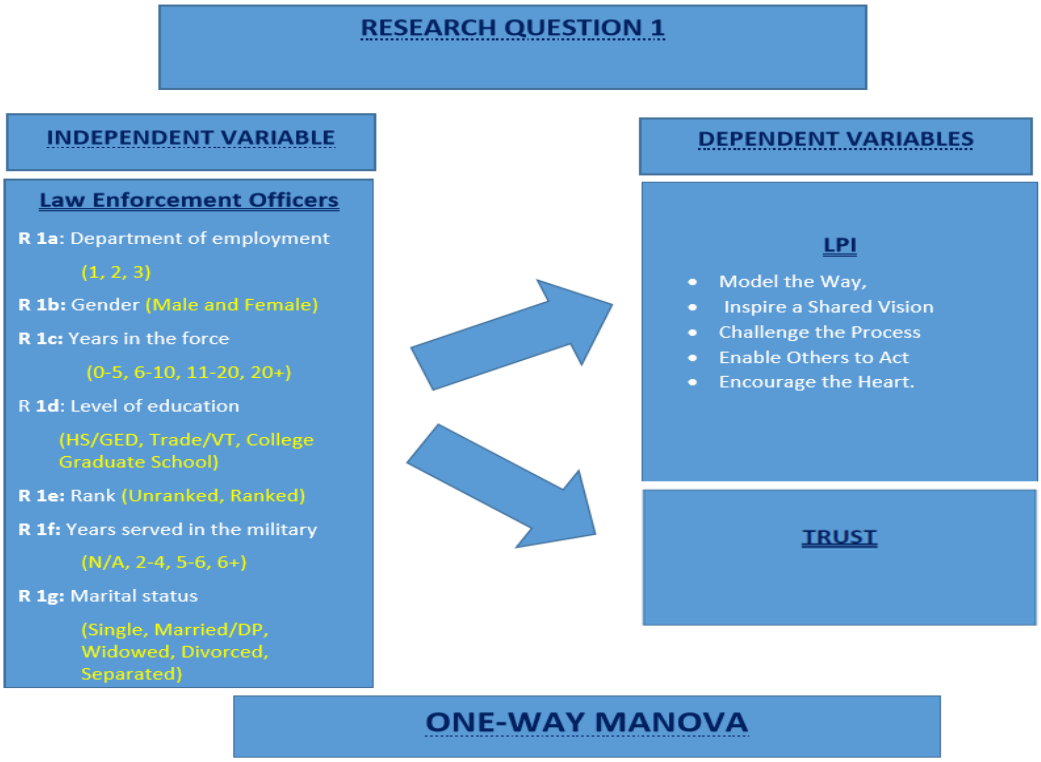
1. Any worthwhile treatment or substantial characteristic will likely affect participants in more than one way, hence the need for additional criterion (dependent) measures.
2. The use of several criterion measures permits the researcher to obtain a more holistic picture and therefore a more detailed description, of the phenomenon under investigation. This stems from the idea that it is extremely difficult to obtain a "good" measure of a trait (e.g., math achievement, self-esteem) from one variable. Multiple

measures on variables representing a common characteristic are bound to be more representative of that characteristic. (p. 126)

To address Research Question 1, a MANOVA was computed for each grouping of the data based on the various independent variables (Figure *4*). For example, MANOVA was used to identify differences across the two groups established by gender. For each MANOVA, the dependent variables were the subscales of the LPI, BFI and the GTS. In a similar manner, groups were established for each of the independent variables and corresponding MANOVA tests were computed to determine if the established groups were different.

Figure 4

Research Question One

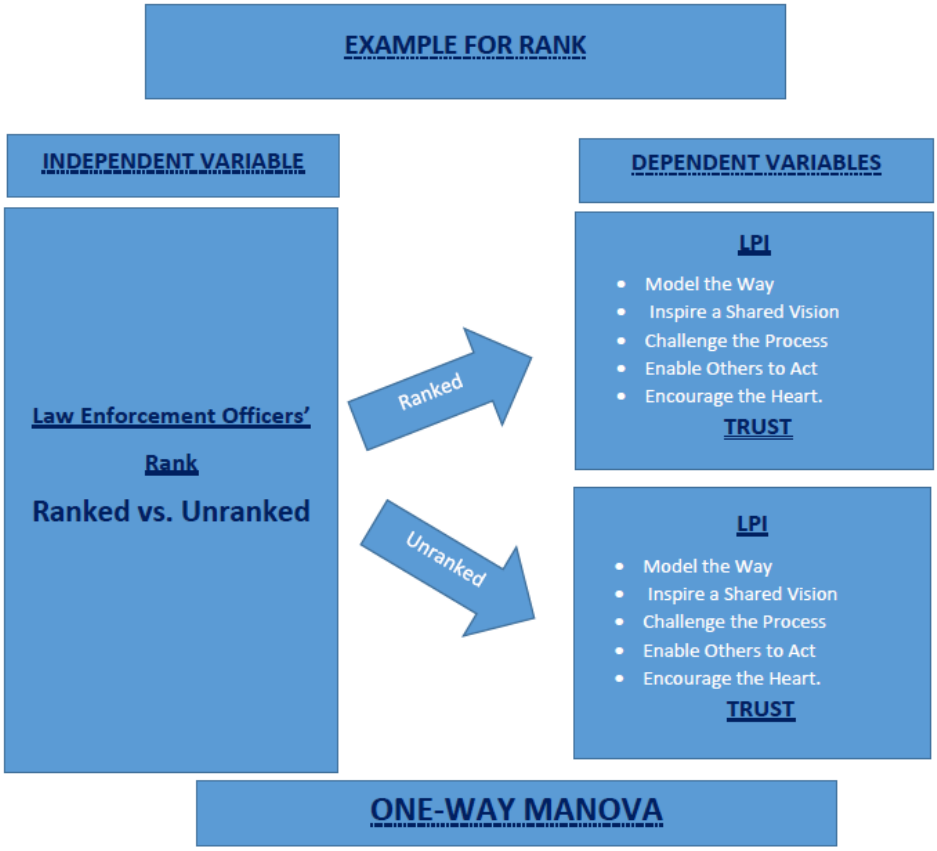


When significant MANOVA results were obtained then the appropriate post hoc analysis was conducted. First, separate ANOVA tests were computed for each dependent variable (e.g.,

rank, Figure 5); that is, ten ANOVA tests were computed to establish which dependent variable(s) contributed to the significant MANOVA results. ANOVA is commonly used to test for differences between two or more means as it analyzes variation between and within each group (Mertler & Vannatta-Reinhart, 2017). It is important to note that if only two groups are established, then the ANOVA and a t-test would provide equivalent results. Mertler and Vannatta-Reinhart (2017) noted that ANOVA only determines if groups are significantly different; it does not identify pairwise differences if three or more groups are involved. If there are only two groups and a significant ANOVA is obtained, then the difference between the two groups for the variable will be established by inspection of the group means.

Figure 5

Research Question One, Variable Example, Rank



If ANOVA establishes a significance among three or more groups, then additional post hoc will be utilized to assess pairwise differences among the groups (Mertler & Vannatta-Reinhart, 2017). Such post hoc tests compare groups or treatments two at a time, which provides pairwise comparisons among the groups (Harris, 1998; Mertler & Vannatta-Reinhart, 2017). Multiple techniques exist for the pairwise comparison of groups and to address the problem of Type I error. These include the Scheffe test, the Bonferroni test, and Tukey's Honest Significant Difference (HSD) (Agresti & Finlay, 2009; Harris, 1998; Mertler & Vannatta-Reinhart, 2017). Yet, if all the assumptions of ANOVA are met, the Tukey HSD is considered to be the safest (Howell, 2010; Sprinthall, 2012; Stoline, 1981). Howell (2010) indicated that Tukey HSD is regarded as the best procedure when the aim is to assess all pairwise comparisons among many groups' means. For the current study, the Tukey HSD was deemed appropriate as the post hoc procedure used for comparison among groups when a significant ANOVA is obtained. Nevertheless, because only two groups were established during the analysis no additional post hoc tests were conducted.

To address research question 2, a MANOVA test was conducted using the subscales of the LPI and the GTS as the dependent variables (see

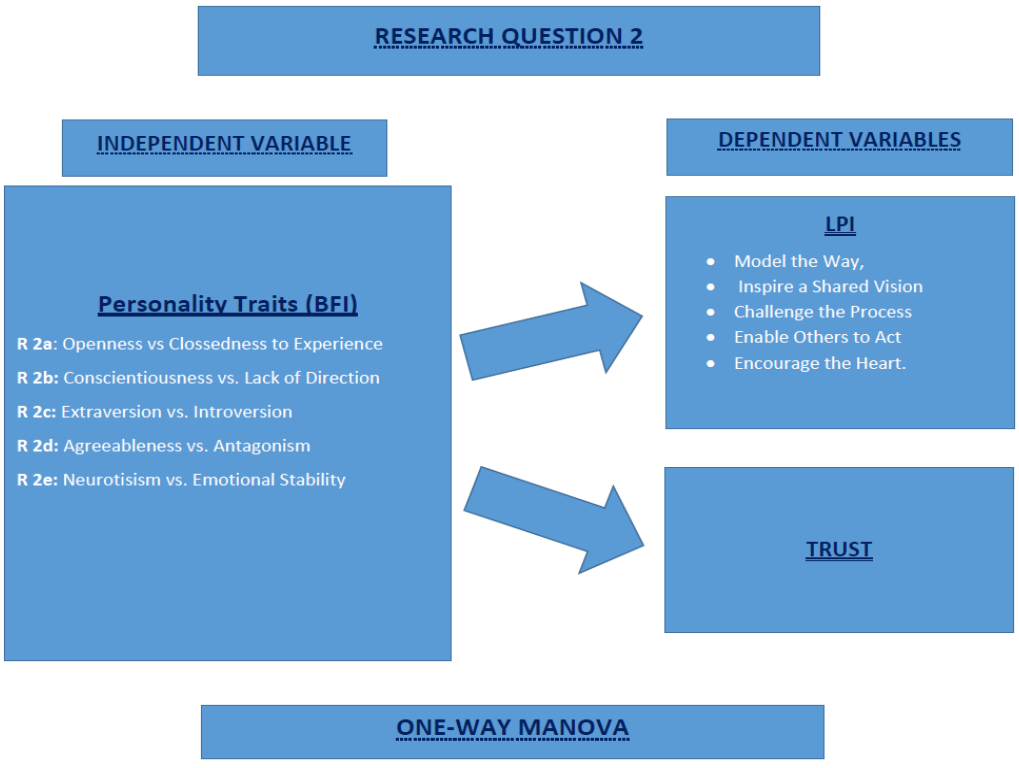
Figure *6*). The results from the BFI were used to establish the groupings. That is, the results from each of the subscales of the BFI were used to identify a group of respondents who self-reported high on the variable and a group of respondents who self-reported low on the variable.

All respondents with average subscale scores below the median were in the low group. All respondents with average subscale scores above the median were included in the high group. Krosnick and Presser (2010) indicated that although mid-points are desirable, O'Muircheartaigh,

(1999) found that there was no relation of attraction of participants to middle alternatives in a Likert scale (e.g., agree nor disagree) with volume of knowledge about the object investigated. According to Tsang (2012), the debate based on the methodological issue illustrates that both using and not using midpoints on a Likert scale are acceptable. The author suggested that the epistemological concern most of the times is if the researchers know the meaning of the responses into midpoints that they intend to measure. Moreover, the author noted that the midpoints do not really affect the reliability and validity of a survey tool, and Chyang, Roberts, Swanson, and Hankinson (2017) further indicated that the use of inclusion and exclusion of points on a scale depends on the survey goals, and on the population under research.

Figure 6

Research Question Two



Ethical Consideration

To alleviate the risk of ethical issues, participation was voluntary, and participants remained anonymous. Participants were asked to not include their name on the survey. Individuals who chose to participate indicated consent by completing the anonymous survey. Data were collected via survey which was comprised of four parts (the LPI, BFI, GTS and demographic information). The survey was provided to the participants on paper and in the form of a web link to Survey Monkey database. The researcher was present to address any possible questions or concerns. To alleviate any stigmatization of non-participation a locked box with a single opening was provided for all participants to place their survey—if they chose to use the paper survey—after they were done. The box included all surveys, including blank surveys from participants that chose not to participate. The researcher setup a computer secure account with a secured password with the intent not to share it with anyone outside of the researcher's committee.

Limitations

Testing may be a potential threat to internal validity. Participants may report a self-assessment not according to how they truly perceive themselves but based on what they may think is optimal for the study; this is known as respondent bias (Paulhus & John, 1998; Terrell, 2016). A threat to external validity may be the ability to generalize the results of the study because it is focused on the specific field of law enforcement officers and in a specific geographic region with particular local idiosyncrasies (Paulhus & John, 1998; Terrell, 2016). Furthermore, the number of the participants was small because of the relatively small size of the organizations involved in this study. Consequently, the reduction of the categories due to a low number of cases presents another limitation.

A threat to external validity may be reactive arrangements and particularly the novelty effect depending on the time they completed the surveys. When for example the surveys were completed during a briefing this may have caused participants to be anxious to follow on their duties and overlook the answers that can assess their leadership practices or personality traits more accurately (Terrell, 2016).

Summary of the Methodology

The third chapter presented the methods of research utilized to explore the relationships of law enforcement perceptions of their leadership practices and their personality dimensions. The research design, data collection, setting, sample size, and survey instruments were summarized. To measure the law enforcement officers' perceptions in the respective areas, three surveys were administered. The Leadership Practices Inventory (LPI) measured the police officers' perceptions of their leadership practices, the General Trust Scale (GTS) assessed the self-reported trust perceptions and the Big Five Inventory (BFI) measured the law enforcement officers' perceptions of their personality dimensions. Furthermore, specific demographic data were collected and analyzed to determine possible associations across subgroups. Chapter four presents the results and findings of this research study for each of the questions. Chapter five provides an interpretation of the findings and a discussion of results. Chapter five also provides key findings, and implications along with recommendations for further study.

CHAPTER FOUR-RESULTS

The purpose of this quantitative study was to investigate relationships among self-reported leadership practices and trust of police officers, across selected demographic variables. The survey instruments used for the study were the Leadership Practices Inventory (LPI) (Kouzes & Posner, 2012), and the GTS (Trust) (Yamagishi & Yamagishi, 1994). The LPI is comprised of the Five Practices of Exemplary Leadership: (a) Model the Way, (b) Inspire a Shared Vision, (c) Challenge the Process, (d) Enable Others to Act, and (e) Encourage the Heart (Kouzes & Posner, 2012). The Trust survey utilizes six-items and is measured through a five Likert-scale component

In addition, the study explored relationships of the self-reported leadership practices and trust across selected personality trait groupings. The instrument used to assess personality traits was the Big Five Inventory (BFI) (John & Srivastava, 1999). The factors assessed by the BFI were: Openness (O), Conscientiousness (C), Extraversion (E), Agreeableness (A), and Neuroticism (N) (John & Srivastava, 1999; McCrae & Costa, 2007). Traditional univariate and multivariate statistical techniques were utilized, including descriptive analysis, and correlations. This chapter provides a summary of the results of these analyses.

Data Screening

Data screening was comprised of several steps. The first step consisted of recoding the reversed questions on the Big Five Inventory (BFI). The second comprised of screening the raw data for missing data. The third step encompassed an analysis for the detection of univariate outliers. A fourth step consisted of screening for normality, linearity and homoscedasticity of the sample. Finally, the fifth step consisted of testing for reliability of the surveys.

Recoding Reversed Questions

The Big Five Inventory is a short assessment with a total of 44 questions and may be completed online, hence the utilization of Survey Monkey. All the items that required a reverse—keyed question items from the BFI were re-coded in the Statistical Package for the Social Sciences (SPSS). Specifically, extraversion questions 6, 21, 31, agreeableness questions 2, 12, 27, 37, conscientiousness questions 8, 18, 23, 43, neuroticism questions 9, 24, 34 and openness questions 35, 41 were reversed scored.

Analysis for Missing Data (Raw Data)

Responses from the surveys and the demographic questions were analyzed for missing data following recommendations of Field (2005) and Mertler and Vannatta Reinhart (2017). The missing data were identified through the SPSS. Because the number was small (i.e., 8-12) and the missing data were mostly scattered, the missing survey values were transformed into serial means. However, the missing values of the demographic categories were reported as missing without any transformations.

The method of using the calculate mean for missing values was deemed appropriate for ordinal data because, when a data set has minimal missing values, an estimate for the missing values can be determined by calculating the mean of the data set and using that mean as the estimated missing value (Field, 2005; Mertler & Vannatta Reinhart, 2017). The sample before screening was consisted of 157 participants with some missing data in their responses. The result after screening was that the sample consisted of all initial 157 participants for the LPI, GTS and BFI surveys; there were no exclusions for the three survey instruments.

It must be noted that the demographic variable estimates for missing data points were not calculated, the exact number of respondents for each of the demographic variables was reported

and the missing cases were excluded from the demographic category analysis. The frequencies of the demographic questions' participants are described on Table 7.

Table 7

Frequencies of Participants per Demographic Category

		Department of employment	Gender	Rank	Years in Law Enforcement	Level of Education	Marital Status	Military Service
N	Valid	149	145	148	148	147	148	148
	Missing	8	12	9	9	10	9	9

Note: N = 157

Outliers

Outliers refers to a data point that differs significantly from other observations (Randolph & Myers, 2013). Outliers for this study were treated based on Hoaglin and Inglewicz (1987) suggestions by utilizing the extreme studentized deviate test also known as Grubbs and Beck (1972) outlier test. The Grubbs and Beck statistic for outliers is based on a calculation, which is parallel to a z-score with corresponding α significance levels; the statistic is known as known as zed score.

The SPSS has an option to calculate the zed score. Using the option provided by SPSS, the zed scores for each of the dependent variables (i.e., LPI, GTS and BFI) were calculated. The table for zed scores has α significance level corresponding to various sample sizes. The SPSS program calculated high low and low zed scores for each dependent variable. These values were compared to the appropriate values in the extreme studentized deviate test table for the sample size of this study (Grubb & Beck, 1972); all values were within acceptable ranges (> 3.334).

Test for Normality

Normality refers to a normal distribution of data and the tests compute how likely is for a random variable to be normally distributed (i.e., symmetric) (Randolph & Myers, 2013). The

survey data for LPI, GTS, and BFI were screened for normality by computing skewness and kurtosis statistics. Skewness refers to the degree of asymmetry of distribution. Skewness coefficients ranged from -0.84 to 0.14. Kurtosis is the degree to which a distribution shaped (i.e., flat, peaked, or bell shaped). Kurtosis coefficients ranged from -0.51 to 0.76. Skewness coefficients less than the absolute value of two (2) and kurtosis coefficients less than the absolute value of seven (7) are considered to be normal distributions (Randolph & Myers, 2013). All values were within acceptable range. The skewness and kurtosis coefficients are summarized in Table 8.

Table 8

Normality of Skewness and Kurtosis Coefficients

Variable	N	Skewness		Kurtosis	
	Statistic	Statistic	St. Error	Statistic	St. Error
Extraversion	157	.028	.194	-0.37	.385
Agreeableness	157	-0.28	.194	-0.37	.385
Conscientiousness	157	-0.59	.194	0.19	.385
Neuroticism	157	0.03	.194	-0.51	.385
Openness	157	0.14	.194	-0.21	.385
Model the Way	157	-0.49	.194	-0.43	.385
Challenge the Process	157	-0.53	.194	-0.32	.385
Inspire a Shared Vision	157	-0.65	.194	0.16	.385
Enable Others to Act	157	-0.84	.194	0.76	.385
Encourage the Heart	157	-0.69	.194	-0.09	.385
Trust	157	-0.32	.194	0.22	.385

Note: N = 157

Reliability Analysis

Instrument reliabilities for the sample were investigated with the use of Cronbach's alpha. The BFI internal consistency ranged from $\alpha = .722$ for Conscientiousness to $\alpha = .826$ for Extraversion. The LPI, internal consistency ranged from $\alpha = .744$ for Enabling Others to Act to

α = .894 for Modeling the Way. Finally, the Trust internal consistency was α = .773. Computed reliability coefficients are presented in Table 9.

Table 9

Reliability Coefficients

Variable	*N* of items	Cronbach's Alpha Study	Cronbach's Alpha* Developers'
Extraversion	8	.826	.813
Agreeableness	9	.755	.821
Conscientiousness	9	.722	.880
Neuroticism	8	.796	.791
Openness	10	.732	.845
Model the Way	6	.894	.772
Challenge the Process	6	.887	.878
Inspire a Shared Vision	6	.875	.803
Enable Others to Act	6	.744	.752
Encourage the Heart	6	.894	.870
Trust	6	.773	.771

Note: *Values provided by instrument developer

Descriptive Analysis—Demographics

For this study, descriptive analyses were conducted for the purpose of organizing and summarizing data, as well as to provide a general understanding of the overall data. The data for this study was based on 157 responses from three different law enforcement departments, two police departments and one sheriff department, that were included in the study. The two police departments were grouped together; thus, the law enforcement departments where collapsed in to main categories: Police department with 68 participants, which accounted for 43.3 % of the total sample, and sheriff department with 81 participants that accounted for 51.6 The missing responses for department of employment were eight which accounted for 5.10 % of the sample (Table 10).

Table 10

Frequencies and Percentages of Department of Employment

	Category	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Police Dpt.	68	43.3	45.6	45.6
	Sheriff Dpt.	81	51.6	54.4	100
	Total	149	94.9	100	
Missing		8	5.10		
Total		157	100		

Note: N = 157

Following the recommendation of Rusticus and Lovato (2014), the gender category was excluded as a grouping variable because results presented disproportionate numbers between the two genders studied. However, is an effort to be thorough the gender category was included in the results section. Specifically, male participants were 117 (74.5%), female participants were 28 (17.8%), and missing participants were 12 (7.6 %) (Table 11).

Table 11

Frequencies for Gender

	Category	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	117	74.5	80.7	80.7
	Female	28	17.8	19.3	100
	Total	145	92.4	100	
Missing		12	7.6		
Total		157	100		

Note: N =157

The years in law enforcement category was collapsed into two categories with 57 (36.3%) working between one and 10 years, and 91 (58%) working between 11 and 20 years and over, and missing values nine (5.70%) (Table 12).

Table 12

Frequencies for Years in Law Enforcement

	Category	Frequency	Percent	Valid Percent
Valid	1-10	57	36.3	38.5
	11-20+	91	58.0	61.5
	Total	148	94.3	100
Missing		9	5.7	
Total		157	100	

Note: N = 157

The level of education of the participants was also collapsed into two categories of 147 cases. The first category included 53 (33.8%) participants that were high school graduates, GED recipients, trade/technical and vocational training graduates, the second category included 94 (59.9%) of the participants that were college graduates, and graduate studies graduates. The missing values were 10 (6.40%) (Table 13).

Table 13

Frequencies for Level of Education

	Category	Frequency	Percent
Valid	HS/GED/Trade/Technical/VT/	53	33.8
	College/Graduate Studies	94	59.9
	Total	147	93.6
Missing		10	6.40
Total		157	100

Note: N = 157

Out of the total number of participants in the study, 59 (43.3%) were ranked law enforcement officers, 81 (51.6%) were unranked, and the missing values were nine (5.70%) (Table 14).

Table 14

Frequencies for Rank

	Category	Frequency	Percent	Valid Percent
Valid	Ranked	57	36.3	38.5
	Unranked	91	58.0	61.5
	Total	148	94.3	100
Missing		9	5.7	
Total		157	100	

Note: N = 157

The marital status of the participants accounted for 37 (23.6 %) that were single never married or divorced, 111 (70.7%) married or in a domestic partnership (none widowed, and none separated), and the missing values were nine (5.70%). The marital status was collapsed to two categories described in Table 15.

Table 15

Frequencies for Marital Status

	Category	Frequency	Percent	Valid Percent
Valid	Single never married/Divorced	37	23.6	25.0
	Married or domestic partnership	111	70.7	75.0
	Total	148	94.3	100
Missing		9	5.70	
Total		157	100	

Note: N =157

Finally, the military service of the law enforcement officers of the sample included 108 (68.8%) who did not serve, and 40 (25.5%) who served between two or more years. The missing values for the Military Service category were nine (5.70%) (Table 16).

Table 16

Frequencies of Military Service

	Category	Frequency	Percent	Valid Percent
Valid	No Military Service	108	68.8	73.0
	Military Service	40	25.5	27.0
	Total	148	94.3	100
Missing		9	5.7	
Total		157	100	

Note: N = 157

Big Five Inventory (BFI)

The Big Five Inventory (BFI) was utilized to measure the five dimensions of extraversion, agreeableness, conscientiousness, neuroticism, and openness to experience (John & Srivastava, 1999). The quantitative scores for the BFI factors were calculated using the questions that comprised each factor. It was determined that the median would be used to determine high and low groups. The groups for analysis were established for each variable and by dividing the factor into the two facets of its continuum (e.g., extraversion vs introversion) by using the sample's median group for each facet (Mertler & Vannatta Reinhart, 2017; Field, 2005). That is, for each factor, two groups were established: one above the median and one below the median. Because SPSS established the groups based on scores, the two groups did not have equal numbers. A summary of the descriptive statistics for each factor of the BFI is provided in table 17.

Table 17

Summary by Variable for the Big Five Inventory

		Extraversion	Agreeableness	Conscientiousness	Neuroticism	Openness
N	Valid	157	157	157	157	157
Mean		.516	.440	.580	.573	.567
Std. Deviation		.501	.498	.495	.496	.497

Note: N =157

General Trust Scale (GTS)

Yamagishi (1998) suggested that in some organizations, such as law enforcement, strong norms support in-group increased cooperation and discourage cooperation with an out-group. Gheorghiu et al., (2009) proposed that this process of a closed society produces trust ties that are weak, while assurance ties become strong. Glaeser and colleagues (2000) explained that when individuals are close socially and are interacting, both trust and trustworthiness rise. The General Trust Scale (GTS) (Yamagishi & Yamagashi, 1994) was utilized to assess trust in law enforcement by using the six-items of the scale. The study group descriptive data that include number of participants, mean, median, mode, standard deviation and minimum and maximum score are depicted in Table 19.

Table 18

Study Group Descriptive Data for the GTS

		Trust
N	Valid	157
	Missing	0
Mean		3.48
Median		3.67
Mode		4.00
Std. Deviation		.612
Minimum		1.83
Maximum		5.00

Note: N = 157

Leadership Practices Inventory (LPI)

The LPI survey instrument is comprised of 30 statements, with six statements measuring each of the five practices: (a) Model the Way, (b) Inspire a Shared Vision, (c) Challenge the Process, (d) Enable Others to Act, and (e) Encourage the Heart. Each of the 30 statements was rated on a 10-point Likert-type scale: (1) Almost Never, (2) Rarely, (3) Seldom, (4) Once in a While, (5) Occasionally, (6) Sometimes, (7) Fairly Often, (8) Usually, (9) Very Frequently, and (10) Almost Always (Kouzes & Posner, 2013). Leadership practices based on the LPI subscales were computed according to Kouzes and Posner's (1988) mathematical formulas (see Appendix F). The computed descriptive statistics for each subscale that include the mean, median, mode and standard deviation, are described in Table 19.

Table 19

Study Group Descriptive Data for the Leadership Practices Inventory

		Model the Way	Inspire a Shared Vision	Challenge the Process	Enable Others to Act	Encourage the Heart
N	Valid	157	157	157	157	157
	Missing	0	0	0	0	0
Mean		7.86	6.99	7.09	8.32	7.52
Median		8.00	7.00	7.17	8.50	7.83
Mode		8.33	8.00	8.17	8.50	10.0
Std. Deviation		1.19	1.78	1.77	1.04	1.78
Minimum		4.83	1.67	1.67	5.17	2.17
Maximum		10.0	10.0	10.0	10.0	10.0

Note: N = 157

Variable Correlations

Bivariate correlations were computed as preliminary analyses. Analyses were conducted to examine the linearity of the relationships among personality traits, trust, and leadership practices. Specifically, bivariate correlations were completed with the Pearson's product of

correlations (Pearson's *r)*. Bivariate-correlation coefficients between the BFI, GTS, and LPI variables ranged values from -.332 to .863. The majority of the relationships were significant, indicating linearity between the variables of interest. A correlation matrix is presented in Table 20.

Linearity of the relationships among the variables were further confirmed with a scatterplot matrix (Appendix H).

Table 20

Correlation Matrix of Variables

	1	2	3	4	5	6	7	8	9	10	11
1. Extraversion											
2. Agreeableness	.322**										
3. Conscientiousness	.130	.260**									
4. Neuroticism	-.300**	-.332**	-.321**								
5. Openness	.239**	.276**	.191*	-.218**							
6. Model the Way	.353**	.325**	.194*	-.120	.369**						
7. Inspire a Shared Vision	.377**	.284**	.182*	-.120	.467**	.863**					
8. Challenge the Process	.358**	.301**	.203*	-.162*	.540**	.799**	.858**				
9. Enable Others to Act	.246**	.431**	.201*	-.164*	.481**	.708**	.725**	.767**			
10. Encourage the Heart	.427**	.392**	.140	-.040	.373**	.800**	.829**	.793**	.712**		
11. Trust	.080	.378**	.182*	-.193*	.270**	.090	.120	.110	.160*	.130	

*Note. N = 157. * p < .05; ** p < .01*

BFI Subscale Correlations. Intercorrelations refer to correlations of subscales with the same survey instrument. The intercorrelations among the BFI subscale where both positive and negative. All correlations were significant except between Conscientiousness and Extraversion (*r* = .130). The highest positive correlation was recorded between Extraversion and Agreeableness (*r* = .322) which signified a small to medium effect size (Cohen, 1988, 1992). The largest negative correlation was reported between Agreeableness and Neuroticism (*r* = -.332), which signified a low to medium effect size (Cohen, 1988, 1992), which in this case meant that as Agreeableness increased Neuroticism decreased. The data indicated that Openness was positively correlated with Agreeableness (r = .276). Neuroticism was negatively correlated with all the remaining BFI factors. The BFI subscale bivariate correlations ranged between the negative correlations *r* -.300 to positive .190.

LPI Subscale Correlations. The correlations among the five subscales of the LPI were positive with statistical significance at the .01 alpha level. The data indicated that there was a positive correlation between Modeling the Way and Inspiring a Shared Vision (*r* = .863), which signified a high effect size (Cohen, 1988, 1992). Additionally, Inspire a Shared Vision and Challenge the Process were also highly correlated (*r* = .858). The subscale correlations ranged between *r* = .708 to .863, indicating statistically high and positive correlations.

Trust Correlations with LPI and BFI. The data indicated that trust was positively correlated with the BFI subscales of Agreeableness (*r* = .378), with Openness (*r* = .270), with Conscientiousness (*r* = .182). The results indicated that trust was negatively correlated with Neuroticism (*r* = -.193). Trust was correlated with the LPI subscale of Enable Others to Act, with an *r* value of .160 (see Table 20).

Summary Descriptive Findings

Several noteworthy findings were revealed during the descriptive analysis. The percentage of married or in domestic partnership officers (n = 111) that responded was disproportionate to those that were either single, never married (n = 22) or divorced (n = 15). The demographic variable of military service reported that law enforcement officers without military training comprised of almost 70% of the study's respondents. Lastly, the number of law enforcement officers that were college or graduate school graduates was two times higher compared to the law enforcement officers that were recipients of high school, GED, vocational and trade school diploma.

Many bivariate correlations were significant; the subscales of the Leadership Practices Inventory (LPI) were intercorrelated with a high effect size. Interestingly, the Big Five Inventory (BFI) produced several inter-correlations that were significant, and with a high effect size but also some inter-correlations that were negative. Specifically, the factor of neuroticism was negatively correlated with the remaining personality traits of extraversion, agreeableness, conscientiousness, and openness.

The correlations between the five subscales of the LPI and several personality traits were positive with statistical significance. Extraversion, Agreeableness, and Openness were positively correlated with all the five subscales of the LPI. Additionally, Conscientiousness positively related with four LPI subscales (i.e., Model the Way, Inspire a Shared Vision, Challenge the Process, and Encourage Others to Act). Neuroticism was found to have significance and a negative linear relationship with Challenge the Process and Enable Others to Act.

The GTS responses were positively related to three personality traits and with one subscale of the LPI. Specifically, the GTS produced positive relationships with Agreeableness,

Conscientiousness and Openness, a negative relationship and significance with Neuroticism, and a positive relationship with the LPI subscale of Enable Others to Act.

Multivariate Analysis of Variance (MANOVA)

Seven MANOVA tests were conducted to address Research Question One. That is, *when groups were established by selected demographic variables, are there differences between group based self-assessed Leadership Practices Inventory subscales and Trust?* For Research Question One, the groups were established using the demographic variables of department of employment, gender, years of employment in law enforcement, level of education years, rank, military service, and marital status.

Five one-way MANOVA tests were conducted to assess possible differences between groups for research question two. That is, *when groups were established by selected personality trait variables, were there differences based on the LPI subscales and Trust?* Dependent variables were based on the self-assessment responses by law enforcement officers using the Leadership Practices Inventory (LPI) (Kouzes & Posner, 2012), and General Trust Scale (GTS) (Yamagishi & Yamagishi, 1994). For all significant MANOVAs, an Analysis of Variance (ANOVA) test was conducted for each dependent variable. Note, that additional post hoc tests were not utilized because responses were grouped by the independent variables to form two levels.

Research Question One

The responses indicated that for *Gender, Military Service, and Marital Status* the group sizes were highly disproportionate. When the sample sizes are highly disproportionate, the resulting impacts on the variance can produce unstable results (Rusticus & Lovato, 2014; Shishkina, Farmus, & Cribbie, 2018). Although these three groupings for the demographic

categories were disproportionate, in an effort to be thorough, MANOVAs were computed; however, the results are presented as exploratory.

For the demographic variable of gender, 117 respondents self-identified as male, 28 respondents who self-identified as female, and 12 participants did not respond to these variables (see Table 7). A one-way MANOVA was conducted to determine if the established groups were different based on the LPI and the GTS. Based on the Box's Test of Covariance Matrices, homogeneity of variance-covariance was assumed as $p = .045$ ($p > .005$) (Tinsley & Brown, 2000); therefore, Wilk's Lambda was used as the criteria to determine significance of the MANOVA. There was not a significant main effect for the Gender category (Wilks' $\Lambda = 0.948$, $F(6, 138) = 1.27$, $p = .276$, multivariate $\boldsymbol{\eta}^2 = .052$). The mean and standard deviation for male respondents was for Model the Way (Model) ($M = 7.80$, $SD = 1.24$), for Inspire Other to Act (Inspire) ($M = 6.87$, $SD = 1.88$), for Challenge the Process (Challenge) ($M = 6.98$, $SD = 1.84$), Enable Others to Act (Enable) ($M = 8.23$, $SD = 1.10$), Encourage the Heart (Encourage), ($M = 7.38$, $SD = 1.87$) and for Trust ($M = 3.52$, $SD = .619$). The mean and standard deviation for female respondents were for Model ($M = 8.14$, $SD = 1.12$), for Inspire ($M = 7.52$, $SD = 1.50$), for Challenge ($M = 7.57$, $SD = 1.64$), Enable ($M = 8.67$, $SD = .850$), Encourage ($M = 8.13$, $SD = 1.58$) and for Trust ($M = 3.37$, $SD = .552$) (see Table 21).

Table 21

Mean and SD of LPI and GTS for Gender Groups

LPI Subscales	Gender	Mean	Std. Deviation	N
Model the Way	Male	7.80	1.24	117
	Female	8.14	1.12	28
Inspire a Shared Vision	Male	6.87	1.88	117
	Female	7.52	1.50	28
Challenge the Process	Male	6.98	1.84	117
	Female	7.57	1.64	28
Enable Others to Act	Male	8.23	1.10	117
	Female	8.67	.850	28
Encourage the Heart	Male	7.38	1.87	117
	Female	8.13	1.58	28
Trust	Male	3.52	.619	117
	Female	3.37	.552	28
Total				145

Note: N = 145

The groupings by Military Service category created disproportionate variable numbers. For the study group, 108 law enforcement officers reported that they did not serve in the military, 40 reported that served and nine chose not to respond (see Table 7). Based on the Box's Test of Covariance Matrices indicated that assumed homogeneity of variance-covariance could be assumed with $p = .388$ ($p > .005$) (Tinsley & Brown, 2000). Wilk's Lambda was utilized to determine significance of the MANOVA. For the military service category, there was not a significant main effect Wilks' $\Lambda = 0.947$, $F(6, 141) = 1.32$, $p = .254$, multivariate $\boldsymbol{\eta}^2 = .053$. The mean and standard deviation for respondents with no military service was for Model ($M = 7.87$, $SD = 1.23$), for Inspire ($M = 7.13$, $SD = 1.80$), for Challenge ($M = 7.01$, $SD = 1.77$), Enable ($M = 8.35$, $SD = 1.07$), Encourage ($M = 7.63$, $SD = 1.85$) and for Trust ($M = 3.51$, $SD = .622$). The mean and standard deviation for respondents with military service was for Model ($M = 7.88$, $SD = 1.22$), for Inspire ($M = 6.67$, $SD = 1.82$), for Challenge ($M = 6.81$, $SD = 1.96$), Enable ($M =$

8.22, *SD* = 1.07), Encourage (*M* = 7.30, *SD* = 1.77) and for Trust (*M* = 3.43, *SD* = .570) (see Table 22)

Table 22

Mean and SD of LPI and GTS for Military Service Groups

LPI Subscales	Military Service	Mean	Std. Deviation	N
Model the Way	No Military Service	7.87	1.23	108
	Military Service	7.86	1.22	40
Inspire a Shared Vision	No Military Service	7.13	1.80	108
	Military Service	6.68	1.81	40
Challenge the Process	No Military Service	7.01	1.77	108
	Military Service	6.81	1.96	40
Enable Others to Act	No Military Service	8.35	1.07	108
	Military Service	8.22	1.07	40
Encourage the Heart	No Military Service	7.63	1.85	108
	Military Service	7.30	1.77	40
Trust	No Military Service	3.51	.622	108
	Military Service	3.43	.570	40
Total				148

Note: N = 148

The last disproportionate demographic category of the study sample was Marital Status. Law enforcement officers reported that 37 were single, never married, or divorced, 111 reported that they were married or in a domestic partnership, and 9 respondents chose not to respond (see Table 7). Homogeneity of variance-covariance was assumed because the Box's Test of Covariance Matrices reported $p = .769$ ($p > .005$) (Tinsley & Brown, 2000). Wilk's Lambda for the marital status category did not produce a significant main effect Wilks' $\Lambda = 0.960$, $F(6, 141) = .972$, $p = .447$, multivariate $\eta^2 = .040$). The mean and standard deviation for single, never married or divorced respondents were for Model (*M* = 7.87, *SD* = 1.15), for Inspire (*M* = 7.26, *SD* = 1.71), for Challenge (*M* = 7.22, *SD* = 1.70), Enable (*M* = 8.32, *SD* = .939), Encourage (*M* = 7.73, *SD* = 1.76) and for Trust (*M* = 3.04, *SD* = .621). The mean and standard deviation for married or domestic partnership respondents were for Model (*M* = 7.88, *SD* = 1.25), for Inspire

(*M* = 6.92, *SD* = 1.85), for Challenge (*M* = 7.06, *SD* = 1.87), Enable (*M* = 8.31, *SD* = 1.11), Encourage (*M* = 7.47, *SD* = 1.85) and for Trust (*M* = 3.49, *SD* = .603) (see Table 23).

Table 23

Mean and SD of LPI and GTS for Marital Status Groups

LPI Subscales	Marital Status	Mean	Std. Deviation	N
Model the Way	Single/NM/Divorced	7.87	1.15	111
	Married/DP	7.88	1.25	37
Inspire a Shared Vision	Single/NM/Divorced	7.26	1.71	111
	Married/DP	6.92	1.85	37
Challenge the Process	Single/NM/Divorced	7.22	1.70	111
	Married/DP	7.06	1.87	37
Enable Others to Act	Single/NM/Divorced	8.32	.939	111
	Married/DP	8.31	1.11	37
Encourage the Heart	Single/NM/Divorced	7.73	1.76	111
	Married/DP	7.47	1.85	37
Trust	Single/NM/Divorced	3.41	.621	111
	Married/DP	3.52	.603	37
Total				148

Note: N = 148

The Department of Employment category included 149 respondents, 68 serving in the police department, 81 serving in the sheriff's department. Eight individuals chose not to respond (see table 7). Based on the Box's Test of Covariance Matrices, homogeneity of variance-covariance was assumed with $p = .073$ ($p > .005$) (Tinsley & Brown, 2000). Wilk's Lambda was chosen as the criterion to determine significance of the MANOVA and did not produce a significant main effect with Wilks' $\Lambda = .052$, $F(6, 142) = 1.24$, $p = .289$, multivariate $\boldsymbol{\eta}^2 = .050$. The mean and standard deviation for Police Department respondents were for Model (*M* = 7.95, *SD* = 1.05), for Inspire (*M* = 7.02, *SD* = 1.60), for Challenge (*M* = 7.31, *SD* = 1.57), Enable (*M* = 8.38, *SD* = 1.10), Encourage (*M* = 7.73, *SD* = 1.53) and for (*M* = 3.50, *SD* = .672). The mean and standard deviation for Sheriff Department respondents were for Model (*M* = 7.79, *SD* = 1.36),

for Inspire (*M* = 6.95, *SD* = 2.00), for Challenge (*M* = 6.90, *SD* = 2.00), Enable (*M* = 8.27, *SD* = 1.04), Encourage (*M* = 7.35, *SD* = 2.04) and for GTS (*M* = 3.49, *SD* = .550) (see Table 24).

Table 24

Mean and SD of LPI & GTS for Department of Employment Groups

LPI Subscales	Department of Employment	Mean	SD	N
Model the Way	Police Dpt.	7.95	1.05	68
	Sheriff's Dpt.	7.79	1.36	81
Inspire a Shared Vision	Police Dpt.	7.02	1.60	68
	Sheriff's Dpt.	6.95	2.00	81
Challenge the Process	Police Dpt.	7.31	1.57	68
	Sheriff's Dpt.	6.90	2.00	81
Enable Others to Act	Police Dpt.	8.38	1.10	68
	Sheriff's Dpt.	8.27	1.04	81
Encourage the Heart	Police Dpt.	7.73	1.53	68
	Sheriff's Dpt.	7.35	2.04	81
GTS	Police Dpt.	3.50	.672	68
	Sheriff's Dpt.	3.49	.550	81
Total				149

Note: N = 149

For the demographic category of the Years of Employment in Law Enforcement, 57 respondents indicated working in law enforcement between one and 10 years, 91 respondents working in law enforcement between 11 and over 20 years, and nine chose not to respond (see Table 7). Homogeneity of variance-covariance was assumed because the Box's Test of Covariance Matrices reported $p = .064$ ($p > .005$) (Tinsley & Brown). Wilk's Lambda for the Years of Employment in Law Enforcement demographic category was significant (Wilks' Λ = .981, F (6, 141) = .443, $p = .849$, multivariate $\boldsymbol{\eta}^2 = .019$). The mean and standard deviation for respondents, who served in law enforcement between 1-10 years, were for Model (*M* = 7.97, *SD* = 1.13), for Inspire (*M* = 7.13, *SD* = 1.51), for Challenge (*M* = 7.30, *SD* = 1.55), Enable (*M* = 8.43, *SD* =.909), Encourage (*M* = 7.60, *SD* = 1.17) and for GTS (*M* = 3.46, *SD* = .602). The

mean and standard deviation for respondents having served in law enforcement between 11-20+ years were for Model (*M* = 7.81, *SD* = 1.27), for Inspire (*M* = 6.93, *SD* = 1.98), for Challenge (*M* = 6.98, *SD* = 1.97), Enable (*M* = 8.24, *SD* = 1.15), Encourage (*M* = 7.50, *SD* = 1.88) and for GTS (*M* = 3.51, *SD* = .607) (see Table 25).

Table 25

Mean and SD of LPI and GTS for Years of Employment in LE Groups

LPI Subscales	Years in LE	Mean	Std. Deviation	N
Model the Way	1-10	7.97	1.13	57
	11-20+	7.81	1.27	91
Inspire a Shared Vision	1-10	7.13	1.51	57
	11-20+	6.93	1.98	91
Challenge the Process	1-10	7.30	1.55	57
	11-20+	6.98	1.97	91
Enable Others to Act	1-10	8.43	.909	57
	11-20+	8.24	1.15	91
Encourage the Heart	1-10	7.60	1.74	57
	11-20+	7.50	1.88	91
GTS	1-10	3.46	.602	57
	11-20+	3.51	.607	91
Total				148

Note: N = 148

For the Level of Education of law enforcement officers, 53 law enforcement officers reported a High School, GED, Trade, Technical or Vocational Diploma, 94 reported that they were either College or Graduate College graduates, and 10 chose not to respond to the Level of Education category (see Table 7). Based on the Box's Test of Covariance Matrices for the Level of Education, homogeneity of variance-covariance was assumed with $p = .152$ ($p > .005$) (Tinsley & Brown). Wilk's Lambda was utilized to determine significance of the MANOVA. For the Level of Education variable, the test did not produce a significant main effect with Wilks' $\Lambda = .977$, $F(6, 140) = .555$, $p = .766$, multivariate $\boldsymbol{\eta}^2 = .023$. The mean and standard deviation for respondents that received a High School, GED, Trade, Technical, or Vocational

Training Diploma were for Model (*M* = 7.90, *SD* = 1.22), for Inspire (*M* = 7.14, *SD* = 1.85), for Challenge (*M* = 7.11, *SD* = 1.82), Enable (*M* = 8.34, *SD* =1.12), Encourage (*M* = 7.70, *SD* = 1.84) and for GTS (*M* = 3.45, *SD* = .560). The mean and standard deviation for respondents who graduated from College or Graduate School were for Model (*M* = 7.87, *SD* = 1.23), for Inspire (*M* = 6.93, *SD* = 1.81), for Challenge (*M* = 7.12, *SD* = 1.82), Enable (*M* = 8.31, *SD* = 1.04), Encourage (*M* = 7.46, *SD* = 1.83) and for GTS (*M* = 3.51, *SD* = .637) (see Table 26).

Table 26

Mean and SD of LPI and GTS for Level of Education Groups

LPI Subscales	Education	Mean	Std. Deviation	N
Model the Way	HS/GED/T/TEC/VT	7.90	1.22	57
	College/GS	7.87	1.23	91
Inspire a Shared Vision	HS/GED/T/TEC/VT	7.14	1.85	57
	College/GS	6.93	1.81	91
Challenge the Process	HS/GED/T/TEC/VT	7.11	1.82	57
	College/GS	7.12	1.82	91
Enable Others to Act	HS/GED/T/TEC/VT	8.34	1.12	57
	College/GS	8.31	1.04	91
Encourage the Heart	HS/GED/T/TEC/VT	7.70	1.84	57
	College/GC	7.46	1.83	91
GTS	HS/GED/T/TEC/VT	3.45	.560	57
	College/GS	3.51	.637	91
Total				148

Note: N = 148

For the Rank category, 57 were ranked law enforcement officers, 91 were unranked law enforcement officers. Nine law enforcement officers chose not to respond (see Table 7). Based on the Box's Test of Covariance Matrices, homogeneity of variance-covariance was not assumed with $p = .000$ ($p < .005$) (Tinsley & Brown). Because assumption of homogeneity of variance-covariance was violated, Pillai's Trace was the appropriate criterion to determine significance of the MANOVA. The test produced a statistically significant difference between the two groups of ranked and unranked law enforcement officers with Pillai's Trace = .001, $F(6, 141) = 4.05$, $p =$

.001, multivariate η^2 = .147 which is considered a large effect size (>.14). The means and standard deviations of the ranked and unranked law enforcement officers are presented in Table 27.

Table 27

Mean and SD of Rank Groups for LPI and GTS

LPI Subscales	Rank	Mean	Std. Deviation	N
Model the Way	Ranked	8.30	.858	57
	Unranked	7.60	1.33	91
Inspire a Shared Vision	Ranked	7.80	1.25	57
	Unranked	6.51	1.94	91
Challenge the Process	Ranked	7.82	1.32	57
	Unranked	6.66	1.95	91
Enable Others to Act	Ranked	8.70	.768	57
	Unranked	8.08	1.16	91
Encourage the Heart	Ranked	8.33	1.72	57
	Unranked	7.04	1.99	91
GTS	Ranked	3.46	.643	57
	Unranked	3.51	.586	91
Total				148

Note: N = 148

An ANOVA was conducted for each dependent variable. The ANOVA for each of the LPI variable was significant; that is, the groups based on Rank were significantly different. For Model the Way, the obtained results were F (1, 146) = 12.7, p = .000, and η^2 = .081, which indicates a medium to large effect size (> .06 < .14). The mean and standard deviation of the ranked law enforcement officers were 8.31 and .858 respectively and for the unranked law enforcement officers the mean and standard deviation were 7.60 and 1.33 respectively (see Table 28). The Model the Way mean for the ranked law enforcement group was higher than the mean for the unranked law enforcement officer group.

For Inspire a Shared Vision the ANOVA was significant (F (1, 146) = 19.9, p = .000 < .05), and η^2 = .120, which indicates a medium to large effect size (> .06 and < .14). The mean

and standard deviation of the ranked law enforcement officers were 7.80 and 1.24 respectively, while for unranked law enforcement officers the mean and standard deviation were 6.51 and 1.94 respectively (see Table 28). The Inspire a Shared Vision mean for the ranked law enforcement group was higher than the mean for the unranked law enforcement officer group.

For Challenge the Process, the obtained results were ($F (1, 146) = 15.7$, $p = .000 < .05$), and $\boldsymbol{\eta}^2 = .097$, which is considered a medium to large effect size (> .06 and < .14). The mean and standard deviation of the ranked law enforcement officers were 7.81 and 1.32 respectively, and for the unranked law enforcement officers the mean and standard deviation were 6.65 and 1.95 (see Table 28). The Challenge the Process mean for the ranked law enforcement group was higher than the mean for the unranked law enforcement officer group.

For Enable Others to Act, the computed results were ($F (1, 146) = 12.7$, $p = .000 < .05$), and $\boldsymbol{\eta}^2 = .081$, which is considered a medium to large effect size (> .06 < .14). The mean and standard deviation of the ranked law enforcement officers were 8.69 and .768 respectively and for the unranked law enforcement officers the mean and standard deviation were 8.08 and 1.16 respectively (see Table 28). The computed results for the Enable Others to Act mean for the ranked law enforcement group was higher than the mean for the unranked law enforcement officer group.

For Encourage the Heart, the obtained results were $F (1, 146) = 19.8$, $p = .000 < .05$), and $\boldsymbol{\eta}^2 = .119$, an effect size that is considered a medium to large (> .06 and < .14). The mean and standard deviation of the ranked law enforcement officers were 8.33 and 1.17 respectively and for the unranked law enforcement officers the mean and standard deviation were 7.04 and 1.98 respectively (see Table 28). In the last subscale of the LPI explored, the Encourage the Heart

mean for the ranked law enforcement group was higher than the mean for the unranked law enforcement officer group.

For the law enforcement Rank and trust, the ANOVA was not significant (F (1, 146) = .324, $p = .570 > .05$, and $\boldsymbol{\eta}^2 = .002$). For trust, ranked law enforcement officers mean and standard deviation were 3.45 and .643 respectively and for unranked law enforcement officers the mean and standard deviation were 3.51 and .586 respectively (see Table 28). A summary of results from ANOVAs for LPI subscales and GTS for the Rank category is exhibited in Table 28.

Table 28

Summary of ANOVAs for Rank Groups Based on LPI Subscales and GTS

Groups	Dependent Variable	Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Rank	Model the Way	17.6	1	17.6	12.7	.000	.080
	Inspire a Shared Vision	58.3	1	58.3	19.9	.000	.120
	Challenge the Process	47.4	1	47.4	15.7	.000	.097
	Enable Others to Act	13.5	1	13.4	12.7	.000	.081
	Encourage the Heart	58.6	1	58.6	19.8	.000	.119
	GTS	.120	1	.120	.324	.570	.002

Note: N = 148

Research Question Two

To study responses based on selected personality traits, groups were established using the BFI subscales (i.e., Extraversion, Agreeableness, Conscientiousness, Neuroticism, and Openness). Again, the LPI subscales and GTS were the dependent variables and five one-way MANOVAs were conducted. The data were analyzed for each factor individually to assess possible differences between groups. Responses were grouped using two different methods. First, based on the median (high group vs. low group, e.g., 1 = agreeableness vs. 0 = antagonism). Second, by using the approximate highest 30% and the lowest 30% of scores for each factor. A MANOVA was computed for each factor for each grouping. Because SPSS

established the groups based on scores, the two groups did not have equal numbers. Interestingly, the results of these MANOVAs for the respective personality traits were the same; that is, both approaches to establishing groups by trait provided the same statistical results. Therefore, the results reported in this section are from the first method—the median was used to establish the groups. Table 29 depicts the LPI group means and GTS for each personality dimensions investigated with the BFI. The SPSS program provides an option to establish group based on the median score using SPSS. This process uses whole numbers to establish group membership; therefore, the numbers in the two group do not match.

Table 29

Mean Scores of BFI, and LPI

Variable	*N*	Model	Inspire	Challenge	Encourage	Enable	GTS*
Extraversion	81	49.22	45.09	45.80	51.40	48.97	3.510
Introversion	76	44.98	38.51	39.06	48.34	41.03	3.460
Agreeableness	69	48.86	44.05	44.98	51.68	48.50	3.688
Antagonism	88	45.84	40.23	40.62	48.54	42.48	3.325
Conscientiousness	91	47.70	42.71	43.70	50.51	50.51	3.540
Lack of Direction	66	46.43	40.81	37.69	43.70	49.11	3.408
Neuroticism	67	46.26	40.87	41.17	48.89	44.87	3.442
Emotional Stability	90	51.80	43.31	44.37	51.31	46.55	3.542
Openness	89	48.72	44.95	46.37	51.60	51.60	3.604
Closedness to Experience	68	45.13	37.93	37.52	47.38	47.72	3.280

Note: N = 157. *GTS is based on a different metric (Yamagishi & Yamagishi, 1994).

When groups were established using the median of responses for the trait Extraversion, the low scoring group included 76 respondents (Introversion), and high scoring group (Extraversion) included 81 respondents. The Box's Test of Covariance Matrices indicated that homogeneity of variance-covariance could be assumed as $p = .018$ ($p > .005$) (Tinsley & Brown, 2000). Therefore, Wilk's Lambda was used as the criteria to determine significance of the MANOVA. There was a significant main effect for Extraversion, with Wilks' $\Lambda = .858$, ($F(6, 150) = 4.14$, $p = .001 > .05$), and multivariate $\boldsymbol{\eta}^2 = .142$, which indicated a large effect size (>

.14) (Stevens, 2002) (see Table 30). The means for each of the LPI subscale and GTS are provided in Table 29.

Table 30

Multivariate Test for Extraversion

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Rank	Wilks' Lambda	.858	4.14	6.00	150	.001	.142

Note: N = 157

As a post hoc analysis, an ANOVA was computed for each dependent variable. The ANOVA for each LPI subscale was significant. For Model the Way, the obtained values were F (1, 155) = 12.7, p = .000, and η^2 = .087, which indicated a moderate to large effect size (> .06). That is, the means for the two groups were significantly different. The mean and standard deviation for the Extrovert group were M = 8.20 and SD = 1.09 and the corresponding values for the Introvert group were M = 7.49 and SD = 1.19. The Model the Way mean for the Extrovert group was higher than the mean for the Introvert group.

For the variable Inspire a Shared Vision, the computed values were F (1, 155) = 19.9, p = .000, and η^2 = .120, which indicated a large effect size, which is turn, ordained that the means for the two groups were significantly different. The mean and standard deviation for the Extrovert group were M = 8.20 and SD = 1.09, and the corresponding values for the Introvert group were M = 7.49 and SD = 1.19. The Inspire a Shared Vision mean for the Extrovert group was higher than the mean for the Introvert group.

For Challenge the Process, the computed values were F (1, 55) = 16.4, p = .000, and η^2 = .095, which indicated a moderate to large effect size (> .06), which denoted significant differences in the means of the two groups. The mean and standard deviation for the Extrovert group were M = 7.63 and SD = 1.51, and the corresponding values for the Introvert group were

M = 6.51 and *SD* = 1.85. The Challenge the Process mean for the Extrovert group was higher compared to the Introvert group.

For Enable Others to Act the computed values were (F (1, 155) = 17.3, $p = .002 > .05$), and $\eta^2 = .100$, which is considered a medium to high effect size (> .06 < .14). The mean and standard deviation for the Extrovert group were *M* = 8.57 and *SD* = .937, and the corresponding values for the Introvert group were *M* = 8.06, and *SD* = 1.07. The results indicated that the Enable Others to Act mean for the Extrovert group was higher compared to the Introvert group.

For Encourage the Heart, the computed values were F (1, 55) = 24.8, $p = .000$, and $\eta^2 = .138$, which is considered a high effect size (> .08) and signified; the means for the two groups were significantly different. The mean and standard deviation for the Extrovert group were *M* = 8.16 and *SD* = 1.45, and the corresponding values for the Introvert group were *M* = 6.63, and *SD* = 1.85. The results indicated that the Encourage the Heart mean was higher for the Extrovert group than the Introvert group.

The extraversion and GTS relationship revealed no significance in the computed values F (1, 155) = .236, $p = .628 > .05$, and $\eta^2 = .002$. The mean and standard deviation for the Extrovert group were *M* = 3.51 and *SD* = .620, and the corresponding values for the Introvert group were *M* = 4.46 and *SD* = .608. The GTS means for Extroversion and Introversion had no significant difference. A summary of the ANOVAs of LPI and GTS for Extraversion is depicted in Table 31.

Table 31

Summary of ANOVAs for Extraversion Based on LPI Subscales and GTS

Groups	Dependent Variable	Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Extraversion	Model the Way	19.5	1	19.5	14.8	.000	.087
	Inspire a Shared Vision	47.1	1	47.1	16.4	.000	.095
	Challenge the Process	49.5	1	49.5	17.3	.000	.100
	Enable Others to Act	10.2	1	10.2	10.1	.002	.061
	Encourage the Heart	68.5	1	68.5	24.8	.000	.138
	GTS	.089	1	.089	.236	.628	.002

Note: N = 157

When groups of responses were established using the Agreeableness variable with a median split, the low Agreeableness group included 88 cases in the low scores (Antagonism). The high Agreeableness group was comprised of 69 cases (Agreeableness). Based on the Box's Test of Covariance Matrices, homogeneity of variance-covariance was assumed with $p = .209$ ($p > .005$) (Tinsley & Brown) and consequently, Wilk's Lambda was used as the criteria to determine significance of the MANOVA. There was a significant main effect for the Agreeableness factor with Wilks' $\Lambda = .834$, $F(6, 150) = 4.99$, $p = .000 < .05$, multivariate $\boldsymbol{\eta}^2 = .166$, which indicated a large effect size (> .14) (see Table 32).

Table 32

Multivariate Test for Agreeableness

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Agreeableness	Wilks' Lambda	.834	4.99	6.00	150	.000	.166

Note: N = 157

As a post hoc analysis, an ANOVA was computed for each dependent variable. For each LPI subscale and for GTS, the ANOVA was significant and produced corresponding medium to high effect sizes. For Model the Way the computed values were $F(1, 155) = 7.12$, $p = .008 < .05$, and $\boldsymbol{\eta}^2 = .044$, which is considered a low to medium effect size (> .02 medium > .06) (Stevens,

2002). Specifically, the mean and standard deviation for the Agreeableness group were *M* = 8.14 and *SD* = 1.00 and the corresponding values for the Antagonistic group were *M* = 7.64 and *SD* = 1.29. The results indicated that the Model the Way mean was higher for the Agreeableness group than the Antagonistic group.

For Inspire a Shared Vision, the computed values were F (1, 155) = 5.08, *p* = .025, and η^2 = .32, which indicated a large effect size (> .14). That is, the means for the two groups were significantly different. The mean and standard deviation for the Extrovert group were *M* = 7.34 and *SD* = 1.48 and the corresponding values for the Introvert group were *M* = 6.77 and *SD* = 1.94. The Inspire a Shared Vision mean for the Agreeableness group was higher than the mean for the Antagonistic group.

For Challenge the Process, the computed values were F (1, 55) = 6.07, *p* = .011 < .05, and η^2 = .041, which indicated a low to medium effect size (> .02, medium > .06), which is turn, meant that the means for the two groups were significantly different. The mean and standard deviation for the Agreeableness group were *M* = 7.49 and *SD* = 1.44, and the corresponding values for the Antagonistic group were *M* = 6.77 and *SD* = 1.95. The Challenge the Process mean for the Agreeableness group was higher than the mean for the Antagonistic group.

For Enable Others to Act, the computed values were F (1, 155) = 10.4, *p* = .002 < .05, and η^2 = .063, which indicated a medium effect size (> .06). That is, it was indicative that the means for the two groups were significantly different. The mean and standard deviation for the Agreeableness group were *M* = 8.61 and *SD* = .083, and the corresponding values for the Antagonistic group were *M* = 8.09 and *SD* = 1.12. The Enable Others to Act mean for the Agreeableness group was higher than the mean for the Antagonistic group.

For Encourage the Heart, the computed values were F (1, 155) = 13.1, $p = .000 < .05$, and $\eta^2 = .078$, which indicated a medium to a large effect size, which suggested that the means for the two groups were significantly different. The mean and standard deviation for the Agreeableness group were $M = 8.08$ and $SD = 1.33$, and the corresponding values for the Antagonistic group were $M = 7.08$ and $SD = 1.96$. The Encourage the Heart mean for the Agreeableness group was higher than the mean for the Antagonistic group.

The ANOVA for GTS was meaningful with the medium to large effect size F (1, 155) = 14.8, $p = .000 < .05$, and $\eta^2 = .087$, which is considered a medium to a large effect size (> .06 and < .14). Specifically, the mean and standard deviation of the Agreeableness group were $M = 3.68$ and $SD = .581$, and the corresponding values for the Antagonistic group were $M = 3.33$ and $SD = .590$. The GTS mean for the Agreeableness group was higher than the mean for the Antagonistic group. A summary of the ANOVAs for Agreeableness for the LPI subscales and GTS is depicted in Table 33.

Table 33

Summary of ANOVAs for Agreeableness Based on LPI Subscales and GTS

Groups	Dependent Variable	Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Agreeableness	Model the Way	9.81	1	9.81	7.12	.008	.044
	Inspire a Shared Vision	15.7	1	15.7	5.08	.025	.032
	Challenge the Process	20.4	1	20.4	6.70	.011	.041
	Enable Others to Act	10.6	1	10.6	10.4	.002	.063
	Encourage the Heart	38.9	1	38.9	13.1	.000	.078
	GTS	5.08	1	5.08	14.8	.000	.087

Note: N = 157

The Conscientiousness group was comprised from 66 law enforcement officers in the low scores (lack of direction), and 91 law enforcement officers in the higher scores (conscientiousness). Based on the Box's Test of Covariance Matrices homogeneity of variance-

covariance was assumed with $p = .466$ ($p > .005$) (Tinsley & Brown). Therefore, Wilk's Lambda was used as the criteria to determine significance of the MANOVA. The test revealed that there was no significant main effect with Wilks' $\Lambda = .965$, $F(6, 150) = .895$, $p = .500 > .05$, and multivariate $\eta^2 = .035$ (Table 34).

Table 34

Multivariate Test for Conscientiousness

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Conscientiousness	Wilks' Lambda	.965	.895	6.00	150	.500	.035

Note: N = 157

The fourth factor of the BFI group was Neuroticism and it included 67 respondents in the low scores (Emotional Stability), and 90 respondents in the higher scores (Neuroticism). Based on the Box's Test of Covariance Matrices, homogeneity of variance-covariance was assumed with $p = .120$ ($p > .005$) (Tinsley & Brown). Wilk's Lambda was utilized to determine significance of the MANOVA. The test revealed that there was significance of the main effect. The calculated values of the main effects were Wilks' $\Lambda = .912$, $F(6, 150) = 2.40$, $p = .030$, multivariate $\eta^2 = .035$, signifying a low effect size ($> .02$).

For Post Hoc analysis, an ANOVA test was conducted to determine if the group means were different. The computed values produced significant results for one subscale of the LPI. Specifically, for Enable Others to Act the computed values were $F(1, 155) = 6.00$, $p = .015 < .05$, and $\eta^2 = .037$, which indicated a low effect size ($> .02$). Specifically, the mean and standard deviation of the Neuroticism group were $M = 8.14$ and $SD = 1.03$, and the corresponding values for the Emotional Stability group were $M = 8.55$ and $SD = 1.01$. The Enable Others to Act mean for the Emotional Stability group was higher than the mean for the Neuroticism group.

The Neuroticism and GTS relationship revealed no significance and the computed values were F (1, 155) =1.03, p = .312, and η^2 = .007. The mean and standard deviation for the Neuroticism group were M = 3.44 and SD = .541, and the corresponding values for the Emotional Stability group were M = 3.51 and SD = .695. The results indicated that that GTS means for Neuroticism and Emotional Stability had no significant difference. A summary of all group differences for Neuroticism and the LPI Subscales and GTS are depicted in Table 35.

Table 35

Summary of ANOVAs for Neuroticism Groups Based on LPI Subscales and GTS

Groups	Dependent Variable	Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Neuroticism	Model the Way	4.77	1	4.77	3.38	.068	.021
	Inspire a Shared Vision	6.34	1	6.34	2.02	.158	.013
	Challenge the Process	10.9	1	10.9	3.51	.063	.022
	Enable Others to Act	6.26	1	6.26	6.00	.015	.037
	Encourage the Heart	.377	1	.377	.118	.732	.001
	GTS	.385	1	.385	1.03	.312	.007

N = 157

The last factor of the BFI that was investigated was Openness. When grouped the factor of Openness included 68 law enforcement officers in the low scores (Closedness to Experience), and 89 law enforcement officers in the higher scores (Openness). Based on the Box's Test of Covariance Matrices, homogeneity of variance-covariance was assumed with p = .013 (p > .005) (Tinsley & Brown), and Wilk's Lambda was used as the criteria to determine significance of the MANOVA. There was a significant main effect for Openness with Wilks' Λ =.779, F (6, 150) = 7.10, p = .000, multivariate η^2 = .221, which indicated a large effect size (> .14).

As a post hoc analysis, an ANOVA was computed for each dependent variable. All the LPI factors and GTS produced a medium to large effect size. For Model the Way, the obtained values were F (1, 155) = 10.2, p = .002 < .05, and η^2 = .062, which indicated a medium effect

size (> .60). That is, the means for the two groups were significantly different. The mean and standard deviation for the Openness group were *M* = 8.12 and *SD* = 1.21, and the corresponding values for the Closedness to Experience group were *M* = 7.52 and *SD* = 1.09. The Model the Way mean for the Openness group was higher than the mean for the Closedness to Experience group.

For the variable Inspire a Shared Vision, the computed values were F (1, 155) = 18.5, *p* = .000, and η^2 = .107, which indicated a large enough effect size, which is turn, ordained that the means for the two groups were significantly different. The mean and standard deviation for the Openness group were *M* = 7.49 and *SD* = 1.69, and the corresponding values for the Closedness to Experience group were *M* = 6.32 and *SD* = 1.68. The Inspire a Shared Vision mean for the Openness group was higher than the mean for the Closedness to Experience group.

For Challenge the Process, the computed values were F (1, 55) = 31.7, *p* = .000 < .05, and η^2 = .170, which indicated a large effect size (> .14). The mean and standard deviation for the Openness group were *M* = 7.73 and *SD* = 1.42, and the corresponding values for the Introvert group were *M* = 6.25 and *SD* = 1.86. The Challenge the Process mean for the Openness group was the highest of the two groups.

For Enable Others to Act, the computed values were F (1, 155) = 16.5, *p* = .000 < .05, and η^2 = .096, which is considered a medium to large effect size (> .06), and signified that the means for the two groups were significantly different. The mean and standard deviation for the Openness group were *M* = 8.60 and *SD* = .919, and for the corresponding values for the Introvert group were *M* = 7.95, and *SD* = 1.07. The results indicated that the Enable Others to Act mean for the Openness group was higher than the Closedness to Experience group.

For Encourage the Heart, the computed values were F (1, 155) = 15.2, p = .000, and η^2 = .089, which is considered a medium to large effect size (> .06) and signified; the means for the two groups were significantly different. The mean and standard deviation for the Openness group were M = 7.99 and SD = 1.70, and the corresponding values for the Closedness to Experience group were M = 6.91, SD = 1.91. The results indicated that the Encourage the Heart group mean was higher for the Openness group than the Closedness to Experience group.

The ANOVA for GTS was meaningful with GTS and the computed values were F (1, 155) = 8.24, p = .005 < .05, and η^2 = .050, which is considered low to a medium effect size (> .02 and < .6). The computed values indicated that the means for the two groups were significantly different. More specifically, the mean and standard deviation of the Openness group were M = 3.60 and SD = .606, and the corresponding values for the Antagonistic group were M = 3.33 and SD = .587. The GTS mean for the Openness group was higher compared to the mean for the Closedness to Experience group. A summary of ANOVAs for Openness for LPI subscales and GTS is depicted in Table 36.

Table 36

Summary of ANOVAs for Openness Based on LPI Subscales and GTS

Groups	Dependent Variable	Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Openness	Model the Way	13.8	1	13.8	10.2	.002	.062
	Inspire a Shared Vision	52.8	1	52.8	18.5	.000	.107
	Challenge the Process	83.8	1	83.8	31.7	.000	.170
	Enable Others to Act	16.2	1	16.2	16.5	.000	.096
	Encourage the Heart	44.3	1	44.3	15.2	.000	.089
	GTS	2.94	1	2.94	8.24	.005	.050

Note: N = 157

Summary of Research Questions Key Findings

To address the main two questions of this study MANOVA tests were conducted. For Research Question One*: when groups are established by selected demographic variables, are there differences in group based self-assessed community leadership practices and trust*, three disproportionate demographic groups were recorded. In an effort to be thorough, the demographic variables of gender, military service and marital status were tested. MANOVA tests produced no significant main effects with the dependent variables of the leadership practices and trust. The only demographic variable that reported a significant main effect as well as significance with all the LPI factors was rank of the law enforcement officers. An ANOVA test was also conducted to assess significance with the GTS and reported no significant differences with the demographic variable of rank. The remaining demographic variables of department of employment, level of education, and years of employment in law enforcement did not report significant differences in responses among the groups tested.

Research Question Two, *when groups are established by selected personality trait variables, are there differences in community leadership practices and trust* produced significant differences in four factors of the Big Five Inventory (BFI). For this question, differences where reported for extraversion, agreeableness, neuroticism and openness. Analytically, MANOVA tests for extraversion reported main effects and ANOVA testing significance with all the leadership factors (i.e., Model the Way, Inspire a Shared Vision, Challenge the Process, Enable Others to Act, and Encourage the Heart). An ANOVA test for Extraversion did not produce any significant difference with Trust. Agreeableness ANOVA tests reported significant results with all the factors of the LPI, and with Trust, which reported the greatest effect size. The ANOVA test for Neuroticism reported significant differences with Enable Others to Act. Neuroticism and

Trust reported no significance between the groups. Lastly, the Openness group produced significant differences with all the LPI factors and with Trust.

Summary

The purpose of this research was to explore relationships among self-reported leadership behavior, trust, and personality dimensions. Specifically, the purpose of this quantitative study was to investigate relationships among the self-reported community leadership practices and trust of law enforcement officers, across selected demographic variables. In addition, the study explored relationships of the self-reported community leadership practices and trust across selected personality trait groupings. Results from multivariate analyses, analysis of variance and a correlation among variables were presented in this section. Chapter Five provides a discussion of salient findings, conclusions, and recommendations for future research.

CHAPTER FIVE

This chapter presents an overview of the current exploratory study, discussion of the salient findings, a conclusion, implications for practice, and recommendations for future research.

Overview

The current study was conducted to explore relationships among self-reported leadership behaviors, trust, and personality dimensions of law enforcement officers. Law enforcement officers from three departments participated in the study. The study addressed two research questions: (a) when groups are established by selected demographic variables, are there differences between groups based self-assessed community leadership practices and trust and (b) when groups are established by selected personality trait variables, are there differences between community leadership practices and trust? To collect data, the demographic questions were combined with self-report survey instruments: the Leadership Practices Inventory (LPI) (Kouzes & Posner, 2012), the General Trust Scale (GTS) (Yamagishi & Yamagishi, 1994), and the Big Five Inventory (BFI) (John & Srivastava, 1999).

Traditional descriptive statistics and correlations were computed to provide information about the study groups. In addition, Multivariate Analysis of Variance (MANOVA) tests were utilized to study differences between groups; Analysis of Variance (ANOVA) tests were used as post analysis because all groupings resulted in two groups. That is, because only two groups were involved in each ANOVA test additional post hoc analysis was not required. The subscales of the LPI and Trust were the dependent variables. Following is the discussion of salient findings of the study.

Discussion of Salient Findings

This study identified three prominent findings. First, statistically significant differences were found between responses of ranked law enforcement officers and responses of unranked law enforcement officers on self-reported leadership practices. Second, certain personality groupings exhibited meaningful correlations and relationships with leadership practices. Lastly, trust with respect to law enforcement is complex and self-reported perceptions of law enforcement about trust do not align with perceptions from other professions.

Ranked vs Unranked Officers

Rank was the only demographic category investigated; findings revealed statistically significant differences. That is, the ranked officers rated themselves higher on each LPI subscale than did unranked officers. This finding suggests that ranked law enforcement officers are more likely to report a higher-level exemplary leadership practices compared to their unranked colleagues. This constitutes a very important finding; explanations may be associated with various parameters such as training or law enforcement service experiences.

For some time, transformational leadership has been the most prominent leadership practice among law enforcement organizations (Herrington & Colvin, 2016; Ortmeier, 1997; Pearson-Goff & Herrington 2014). Additionally, the LPI survey is considered sensitive to transformational leadership practices (Carless, et al., 2000; Piral, 2018; Vito, Vito, & Higgins, 2014). The finding of the current study related to rank is consistent with other research that has utilized rank as an independent variable (Carless, et al., 2000; Piral, 2018; Vito, Vito, & Higgins, 2014). It is possible that high self-ratings of ranked law enforcement officers about their own exemplary leadership practices were related to their involvement in transformational leadership within their respective department.

Research related to leadership practices of lower level law enforcement officers (e.g., sergeant, patrol officers, deputies) is limited (Haberfeld, 2006; O'Hara, 2005; Reese, 2005). However, some researchers have suggested that leadership within law enforcement is likely to emerge from the structural and cultural environment characteristics of these organizations rather than a merit-based system of demonstrated exemplary leadership practices (Haberfeld, 2006; Mastrofski, 1998; Osborne & Gaebler, 1992). Shafer (2008) criticized the promotion system via seniority in law enforcement and argued that the system is characterized by "absence of promotional candidates of adequate quality and caliber" (p. 239).

Although, it was not an aim of the current study to compare exemplary leadership of law enforcement with the general population, a comparison of results from selected groups provides an additional perspective. Posner (2018) published a summary of responses from more than 400,000 individuals; these mean scores represent a normative type group for comparison. In addition, Harvey (2005) conducted a study of policy officers; the results provided mean LPI self-reported responses from 33 police chiefs. Finally, the means for ranked officers and unranked officers were considered. The LPI subscale means from the study groups, the Harvey study, and Posner are summarized in Table 37.

Table 37

Mean Scores of LPI-Self Database, LA Chiefs, and Ranked and Unranked LE Officers*

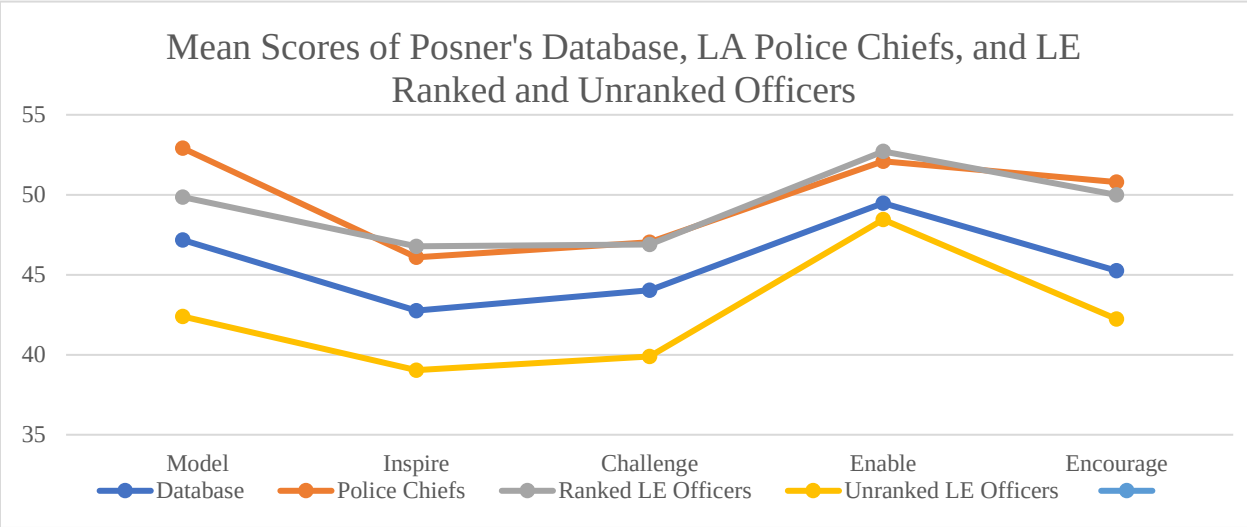
	N	Model	Inspire	Challenge	Enable	Encourage
Database**	416,717	47.17	42.76	44.03	49.48	45.26
Police Chiefs***	33	52.91	46.09	47.03	52.09	50.79
Ranked LE officers	57	49.85	46.78	46.90	52.71	49.99
Unranked LE Officers	91	42.40	39.04	39.90	48.45	42.24

**Means are averages of all six questions in each subscale*
*Source: **Posner (2018b), ***Harvey (2005)*

For illustative purposes, a line graph of the group means across the LPI subscales was developed. An inspection of Figure 7 indicates that the patterns of responses for each group across the LPI subscales are similar. For example, each group tended to be highest on Enable Others, followed by Model the Way. Additionally, each group tended to self-rate lower on Inspire a Shared Vision and Challenge the Process. The ranked law enforcement officers of the current study and the LA Police Officers had very similar patterns; their self-ratings are strong compared to the Posner (2018) database of ratings. Finally, Figure 7 illustrates the relatively low self-ratings of the unranked officers; their self-ratings were statistically lower than the corresponding ratings of the ranked officers.

Figure 7

Mean Score Depiction Comparison



In summary, the self-ratings suggest that the leadership practices of ranked officers were comparable to practices of the Police Chiefs in Harvey's study and were meaningfully higher than the corresponding rating of the unranked officers. These findings are consistent with other leadership studies that suggested that previous leadership experiences and professional development were related to leadership effectiveness and that highly relevant experiences—in profession relevant leadership positions—were significantly better than less relevant experiences (Avery, Tonidandel, Griffith, & Quiñones, 2003; Bettin & Kennedy, 1990).

Leadership emergence may be based on structure and culture; however, findings of the current study suggested a merit-based system of upward mobility was present within these organizations. Specifically, the self-ratings of ranked law enforcement officers in the study group produced higher means on all the subscales of LPI than unranked officers, which suggests that these departments follow some merit criteria for promotions and/or provide the resources to

ranked law enforcement officers (e.g. training and professional development) to promote exemplary leadership skills.

Likewise, it could be argued that only officers who would rate themselves high were promoted or that only highly skilled officers were promoted. However, this is not likely given the low ratings of unranked officers and the practice of promoting unranked officers to positions of rank. Thus, it is reasonable to assume that the merit system is working and that ranked officers develop the corresponding skills and knowledge after they are hired.

Rank and Gender. A current issue within law enforcement is related to interaction of rank and gender. A study by Drew and Saunders (2019) suggested that almost 80% of male law enforcement officers believed that female law enforcement officers were promoted based on gender rather than skills, knowledge, and experience.

The current study group was based on 157 cases; however, the numbers of responses for various demographic groups varied from 145 to 149 respondents; that is, some respondents did not complete all demographic questions. The rank category was comprised of 145 cases. These responses included 43 male ranked law enforcement officers, 74 unranked male law enforcement officers, 12 female ranked law enforcement officers, and 16 unraked law enforcement officers. That is, 43% of female law enforcement officers were ranked and 37% of male law enforcement officers were ranked. Additionally, the results of chi square analysis did not reveal any significant association between rank and gender. However, a closer look into years of employment in law enforcement revealed that 11 female law enforcement served more than 11 years. Essentially, 11 of the 12-female ranked law enforcement officers had 11 or more years of employment. In essence, for this study group, female law enforcement officers, who serve over 11 years, were ranked.

Potentially, the lack of a relationship between rank and gender may be explained in the literature, which suggests that both male and female officers identify similar factors as barriers to promotion (e.g. shift changes, child care needs, family activities) (Archbold, Hassell, & Stichman, 2010; Drew & Saunders, 2019). Theoretically, the removal of barriers to promotions could support more promotions; however, for this study group the women seemed to be able to achieve rank in a timely manner.

Personality and Leadership within Law Enforcement

Contrary to the positive and meaningful bivariate correlations among the LPI subscales, the bivariate correlations among the subscales of the BFI were not all positive and not all meaningful. Groups were established based on self-assessed personality dimensions from the BFI and MANOVAs were conducted. The LPI subscales and Trust were the dependent variables. The data produced meaningful significant differences for three dimensions of the Big Five Inventory (Extraversion, Agreeableness, and Openness). Specifically, for these personality grouping, the mean scores for all LPI subscales were consistently significantly above the corresponding means. Additionally, for these personality factors, the bivariate correlations with each of the LPI subscales were positive and statistically significant.

The Agreeableness personality dimension refers to the degree to which an individual is cooperative, caring, trusting, and sympathetic towards others (Costa & McCrae, 1992). Agreeableness of law enforcement officers relates to their ability to appear resilient, with cooperative and pleasant demeanors that facilitate efficacy and success (Laursen, Pulkkinen, & Adams, 2002). Officers who rated themselves high on Agreeableness consistently rated themselves high on all subscales of the LPI the bivariate correlations between Agreeableness; each of the LPI subscales were positive and statistically significant.

Openness is the extent to which an individual desires uniqueness, change, variety, and the disposition to be imaginative, nonconforming, unconventional, and autonomous (Costa & McCrae, 1992). Sosik, Kahai, and Avolio (1998) suggested that individuals with the characteristics of Openness are more likely to emerge as leaders and to be effective leaders. In addition, individuals possessing high levels of collective openness normally engage in leadership behaviors that are characterized by supportiveness and efficiency (Hoffman & Jones, 2005). The officers who rated themselves high in Openness also tended to rate themselves high on all the LPI scales. Additionally, the bivariate correlations between Openness and each of the LPI subscales were positive and statistically significant.

Extraversion provides an indication of the extent to which one is cheerful, social, gregarious, fun-loving, and enthusiastic (Costa & McCrae, 1992). Zhao and Seibert (2006) suggested that individuals who score high on extraversion are excitement seekers, stimulated, cheerful; also, they like people and large groups. These researchers indicated that extraversion is a vital trait in group management. In addition, Barrick, Parks, and Mount (2005) explained that extraverts enjoy working, socializing, and motivating those around them, which can potentially affect aspects of leadership in a working environment. For the current study, officers who rated themselves high on Extroversion rated themselves high on the subscales of the LPI and the bivariate correlations between Extroversion and each of the LPI subscales were positive and statistically significant.

In summary when personality types were considered, study findings were aligned with literature that indicated a strong relationship between personality traits and leadership. For example, Judge et al. (2002b) found that the five-factor model had a multiple correlation of .48 with a measure of leadership. These findings are consistent with Lord, De Vader, and Alliger

(1986) who found strong support for a leadership trait perspective when the traits were organized according to the five-factor model. Additionally, several studies have proposed that personality and behavior variables are related to leadership practices (Funder, 2006; Penke, 2011; Voyer & McIntosh, 2013). Taking the determinants of leadership practices even further, Lord and colleagues (1986) concluded that there is a parallel between trait approaches to leadership perceptions and work on the general topic of using traits to predict behavior. Judge and colleagues (2002b) reported that the Big Five factors are thought to constitute the majority of the personality dimensions and that several predict leadership.

However, in the current study only Openness, Extraversion, and Agreeableness groupings of the responses were meaningfully associated with all five of the subscales of the LPI. Given the limitation of self-reporting, these findings suggested that law enforcement could potentially benefit in several areas of policing (e.g. community policing, recruitment, future leadership, and police-community relations) by assessing personalities of law enforcement officers (recruits); specifically, the degree to which they possess traits such as Agreeableness, Openness, and Extraversion should be considered.

Trust and Leadership within Law Enforcement

The nature of trust in law enforcement is a complex phenomenon (Goldsmith, 2005); trust, or better distrust, has become a significant issue within the contemporary law enforcement environment (Stoutland, 2001). Additionally, research has established that trust is an essential component of general leadership theory (Burke et al., 2007; Gillespie, & Mann, 2004; Dirks & Ferrin, 2002). However, for this study, the results of the analysis related to GTS were not consistent with general leadership theory and research.

Interestingly, results indicated that trust was not associated with any demographic groupings of law enforcement officers. That is, the levels of self-reported trust were similar across all demographic grouping. When personality groupings were considered, GTS contributed to significant differences in only two groupings—Agreeableness and Extraversion. The correlation between GTS and Agreeableness was highly positive. However, the bivariate correlations between GTS and the subscales of the LPI were low. For the LPI subscales, only the correlation between Enable Others to Act and GTS was significant, but only accounted for 4% of the variance between the variables.

The lack of meaningful relationships between leadership practices and trust was somewhat surprising. However, within law enforcement, there are core parameters that provide possible explanations for these findings. First, the culture and environment within law enforcement establish an expectation of a high level of trust of ones' fellow officers and other members of the organization. Law enforcement culture is driven by a set of values that shape how law enforcement officers perceive their working environment and how they act within it (Paoline & Terill, 2014). For example, the high positive correlation between Enable Others to Act and GTS could possibly relate to trust and relationships within law enforcement. That is, within the organization, the relationships between individuals may promote a high level of trust and correspondingly high self-reported rates for trust.

Second, the community is dangerous because of the nature of the day-to-day routine of officers on the street. The occupational environment of law enforcement encompasses unpredictability and inherent dangers; simply stated, too much trust could get you killed. Thus, perceptions are shaped by real and perceived dangers associated with policing. Additionally, a mentality is created and reinforced through officer recruitment, training, and work experience,

which manifests in mistrusting attitudes toward the public (Nhan, 2014). It is difficult for law enforcement officers to trust the community when they continuously face unknown dangers from that very community. Law enforcement officers' distrust of the community is common (Goldsmith, 2005; Kääriäinen, 2007; Stoutland, 2001; Tyler, 2005). Therefore, self-reported levels of trust based on community relationship would be expected to be low.

In summary, the nature of trust within law enforcement is complex. On one hand, trust within a department should tend to be high. On the other hand, law enforcement officers' trust of the community should be expected to be low. Thus, lack of relationships between trust and the other variables, potentially, relates to confounding nature of trust within law enforcement. The work environment and nature of the work within law enforcement officers highlights the difficulty of assessing trust.

Conclusion

The current study is among the few studies that have explored relationships of both ranked and unranked law enforcement officers. Additionally, it is the only known study that investigated personality traits, community leadership practices, and trust among law enforcement officers. Moreover, the current study is the only known study that utilized the Big Five inventory (BFI) in conjunction with the Leadership Practices Inventory (LPI), and the General Trust Scale (GTS). Potentially, trust, and leadership practices are key concepts related to the improvement of community policing

The findings of this study indicated that ranked law enforcement officers self-reported higher levels of exemplary leadership and that within the study sample the ranked female law enforcement officers appeared to have received opportunities for promotion. Moreover, the findings of this study did not support the notion that promotion is based strictly on politics and

hierarchy as well as lack of merit. Additionally, the findings of this study suggest that particular personality dimensions revealed relationships to exemplary leadership (i.e., Agreeableness, Openness, and Extraversion).

Implications for Practice

This study constitutes a starting point to develop an understand community leadership practices of law enforcement officers in conjunction to personality dimensions and trust. The results of the current study have several implications for future practice in law enforcement community leadership as well as impacts of personality dimensions and general trust.

The finding that ranked law enforcement officers exhibited relationships with all the factors of the LPI has implications for leadership practices and training of law enforcement officers. Overall, the study suggested that the training and professional development for ranked officers impacted their understanding of effective leadership practices; thus, these activities should be continued and possibly expanded. Additionally, such trainings and professional development should be extended for unranked law enforcement officers, which could potentially promote higher levels of exemplary leadership within the departments.

The findings of the current study support the theory that indicated relationships between personality dimensions and community leadership practices. These findings have implications in the applied setting: (a) personality dimensions could be meaningful for recruitment; (b) development of exemplary leadership practices could support community policing; and (c) trust between law enforcement the community should be addressed.

Anderson, Gisborne, and Holliday (2006) asserted the need to construct a foundation for effective leadership within policing and to develop each law enforcement officer into a leader. Therefore, it may be helpful to assess personality dimension of potential candidates, and to

develop appropriate screening procedures. Using evaluations based on personality dimensions, law enforcement could possibly identify candidate characteristics associated with future exemplary leadership practices, which are essential for effective community policing (Paoline, 2003; Schafer, 2010; USDJ, 2015). That is, Agreeableness, Extraversion, and Openness personality types have the potential to develop into exemplary community and organizational leaders

Moreover, to overcome the structural and cultural barriers characterizing law enforcement organizations (Haberfeld, 2006; Mastrofski, 1998; Osborne & Gaebler, 1992), law enforcement supervisors could explore possible interactions between personality dimensions and professional development. A merit-based system for upward mobility and promotions could be developed based on skills, knowledge, and demonstrated exemplary leadership. Consequently, the evaluation of personality dimensions (e.g., Agreeableness, Openness, Extraversion) and/or leadership attributes (e.g., trust, fairness, situational responses) (Van Craen, 2016) has potential.

Exemplary leaders are needed at all levels of law enforcement; effective professional development, training, and experiences have potential to develop exemplary leadership skills. The findings of the current study suggest that professional development and training may potentially interact with personality dimensions to promote exemplary leadership practices. For example, Day (2000) proposed that developing self-awareness, self-actualization, self-regulation, and self-motivation related to effective leadership practices. Law enforcement officer training not only assists in development of skills and knowledge about leadership, it helps the development of leaders (Drath & Palus, 1994). Again, effective leaders are crucial in community policing.

As discussed above, trust within law enforcement is very complex; this study did not establish meaningful links between trust and other variables considered. However, one of the most important aspects of community policing is mutual trust between the public and law enforcement. Literature on community trust towards law enforcement suggests that trust is low (Corsaro, Frank, & Ozer, 2015); additionally, trust of law enforcement towards the community is low (Van Craen, 2016). Issues related to trust should be considered and could be addressed.

Interestingly, Carr and Maxwell (2017) found that organizational and supervisory justice affects public trust positively as well as trusting relationships. Rosenbaum and colleagues (2003) suggested—for meaningful and trusting relationships with the members of the community—law enforcement should methodically initiate social encounters with the community to promote trust. For example, law enforcement could create multicultural nights and school presentations on the difficulties of peace keeping by sharing stories of the field.

Van Craen (2016) argued that officers–supervisor relationships and officers–citizen relationships can improve when supervisors provide leadership based on internal procedural justice. That is, trust could be developed and enhanced. For example, an emphasis on the importance of neutrality, respect, voice, and accountability as constituting aspects of internal procedural justice, may potentially create an example of how law enforcement officers interact with the public.

In summary, there are three main implications suggested from the results of this study. First, personality dimensions may be important as a possible screening tool for recruitment. Second, the development of exemplary leadership practices for unranked law enforcement officers may have positive implications for community policing. Third, the lack of mutual trust between law enforcement and the community should be addressed. Law enforcement should

consider activities to improve trust, for example the implementation of internal procedural justice and positive community/law enforcement activities.

Recommendations for Future Research

This study was exploratory in nature; therefore, many approaches could be utilized in future research. Qualitative research could be performed to identify specific themes related to exemplary leadership within policing. Researchers could conduct case studies of different law enforcement departments in both rural and urban areas as well as in different geographic locations. Case studies could explore interactions among personality dimensions and community leadership practices.

A longitudinal study could be conducted to personality dimensions in relationship to community leadership practices of law enforcement. Additionally, potential changes in trust could be studied in conjunction with interventions, time, and/or professional development. A longitudinal study could explore relationships between professional development and development of exemplary leadership skills. Specifically, regarding trust, other dimensions of trust could be explored. For example, study of propensity to trust compared to various dimensions of trust. Future research for example could use the propensity to trust survey predicting exemplary leadership or specific personality dimensions. Specific models of personality could even be used for predictive research (e.g., success in policing, retention, years to promotion). Additionally, pre-post studies could be conducted related to training, professional development, and time in rank. For example, a pre-post study related to an intervention or a series of workshops designed to improve trust could be conducted.

It seems appropriate for future researchers to sample larger groups of individuals by combining data from different agencies, thereby maximizing the power to detect alternative

hypotheses and potentially overcoming the limitations of small groups that in cases are presented in disproportionate numbers. Lastly, the current research study could be replicated to other law enforcement agencies as well as several public service domains such as the military and fire department.

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Appendix A

Leadership Practices Inventory Survey Instrument

LPI LEADERSHIP PRACTICES INVENTORY

BY JAMES M. KOUZES & BARRY Z. POSNER

INSTRUCTIONS

You are being asked by the person whose name appears at the top of the next page to assess his or her leadership behaviors. Below the person's name you will find thirty statements describing various leadership behaviors. Please read each statement carefully, and using the rating scale below, ask yourself:

"How frequently does this person engage in the behavior described?"

When selecting your response to each statement:

- Be realistic about the extent to which this person actually engages in the behavior.
- Be as honest and accurate as you can be.
- DO NOT answer in terms of how you would like to see this person behave or in terms of how you think he or she should behave.
- DO answer in terms of how this person typically behaves on most days, on most projects, and with most people.
- Be thoughtful about your responses. For example, giving this person 10s on all items is most likely not an accurate description of his or her behavior. Similarly, giving someone all 1s or all 5s is most likely not an accurate description either. Most people will do some things more or less often than they do other things.
- If you feel that a statement does not apply, it's probably because you don't see or experience the behavior. That means this person does not frequently engage in the behavior, at least around you. In that case, assign a rating of 3 or lower.

For each statement, decide on a response and then record the corresponding number in the box to the right of the statement. After you have responded to all thirty statements, go back through the LPI one more time to make sure you have responded to each statement. *Every* statement *must* have a rating.

The Rating Scale runs from 1 to 10. Choose the number that best applies to each statement.

RATING SCALE	1-Almost Never	3-Seldom	5-Occasionally	7-Fairly Often	9-Very Frequently
	2-Rarely	4-Once in a While	6-Sometimes	8-Usually	10-Almost Always

When you have completed the LPI-Observer, please return it to:

_____

_____

_____

Thank you.

LPI: LEADERSHIP PRACTICES INVENTORY OBSERVER

Name of Leader: _____

I (the Observer) am This Leader's (Check one): ☐ Manager ☐ Direct Report ☐ Co-Worker ☐ Other

To what extent does this leader engage in the following behaviors? Choose the response number that best applies to each statement and record it in the box to the right of that statement. He or She:

1.	Sets a personal example of what he/she expects of others.	
2.	Talks about future trends that will influence how our work gets done.	
3.	Seeks out challenging opportunities that test his/her own skills and abilities.	
4.	Develops cooperative relationships among the people he/she works with.	
5.	Praises people for a job well done.	
6.	Spends time and energy making certain that the people he/she works with adhere to the principles and standards that we have agreed on.	
7.	Describes a compelling image of what our future could be like.	
8.	Challenges people to try out new and innovative ways to do their work.	
9.	Actively listens to diverse points of view.	
10.	Makes it a point to let people know about his/her confidence in their abilities.	
11.	Follows through on the promises and commitments he/she makes.	
12.	Appeals to others to share an exciting dream of the future.	
13.	Searches outside the formal boundaries of his/her organization for innovative ways to improve what we do.	
14.	Treats others with dignity and respect.	
15.	Makes sure that people are creatively rewarded for their contributions to the success of projects.	
16.	Asks for feedback on how his/her actions affect other people's performance.	
17.	Shows others how their long-term interests can be realized by enlisting in a common vision.	
18.	Asks "What can we learn?" when things don't go as expected.	
19.	Supports the decisions that people make on their own.	
20.	Publicly recognizes people who exemplify commitment to shared values.	
21.	Builds consensus around a common set of values for running our organization.	
22.	Paints the "big picture" of what we aspire to accomplish.	
23.	Makes certain that we set achievable goals, make concrete plans, and establish measurable milestones for the projects and programs that we work on.	
24.	Gives people a great deal of freedom and choice in deciding how to do their work.	
25.	Finds ways to celebrate accomplishments.	
26.	Is clear about his/her philosophy of leadership.	
27.	Speaks with genuine conviction about the higher meaning and purpose of our work.	
28.	Experiments and takes risks, even when there is a chance of failure.	
29.	Ensures that people grow in their jobs by learning new skills and developing themselves.	
30.	Gives the members of the team lots of appreciation and support for their contributions.	

LPI: LEADERSHIP PRACTICES INVENTORY OBSERVER

Appendix B

Permission Letter for the Use of the Leadership Practices Inventory

WILEY

June 14, 2019, 2019

Dimitrios Kyriakou
1555 Ridgeview Dr #50
Reno, NV 89519

Dear Mr. Kyriakou:

Thank you for your request to use the LPI®: Leadership Practices Inventory® in your research. This letter grants you permission to use either the print or electronic LPI [Self/Observer/Self and Observer] instrument[s] in your research. You may ***reproduce*** the instrument in printed form at no charge beyond the discounted one-time cost of purchasing a single copy; however, you may not distribute any photocopies except for specific research purposes. If you prefer to use the electronic distribution of the LPI you will need to separately contact Joshua Carter (jocarter@wiley.com) directly for further details regarding product access and payment. Please be sure to review the product information resources before reaching out with pricing questions.

Permission to use either the written or electronic versions is contingent upon the following:

(1) The LPI may be used only for research purposes and may not be sold or used in conjunction with any compensated activities;
(2) Copyright in the LPI, and all derivative works based on the LPI, is retained by James M. Kouzes and Barry Z. Posner. The following copyright statement must be included on all reproduced copies of the instrument(s); "Copyright © 2013 James M. Kouzes and Barry Z. Posner. Published by John Wiley & Sons, Inc. All rights reserved. Used with permission";
(3) One (1) **electronic** copy of your dissertation and one (1) copy of all papers, reports, articles, and the like which make use of the LPI data must be sent **promptly** to my attention at the address below; and,
(4) We have the right to include the results of your research in publication, promotion, distribution and sale of the LPI and all related products.

Permission is limited to the rights granted in this letter and does not include the right to grant others permission to reproduce the instrument(s) except for versions made by nonprofit organizations for visually or physically handicapped persons. No additions or changes may be made without our prior written consent. You understand that your use of the LPI shall in no way place the LPI in the public domain or in any way compromise our copyright in the LPI. This license is nontransferable. We reserve the right to revoke this permission at any time, effective upon written notice to you, in the event we conclude, in our reasonable judgment, that your use of the LPI is compromising our proprietary rights in the LPI.

Best wishes for every success with your research project.

Cordially,

Ellen Peterson
Permissions Editor
Epeterson4@gmail.com

Appendix C

BIG FIVE INVENTORY (BFI)

Reference

John, O. P., & Srivastava, S. (1999). The Big-Five trait taxonomy: History, measurement, and theoretical perspectives. In L. A. Pervin & O. P. John (Eds.), *Handbook of personality: Theory and research* (Vol. 2, pp. 102–138). New York: Guilford Press.

Description of Measure:

44-item inventory that measures an individual on the Big Five Factors (dimensions) of personality (Goldberg, 1993). Each of the factors is then further divided into personality facets.

The Big Five Factors are (chart recreated from John & Srivastava, 1999):

Big Five Dimensions	Facet (and correlated trait adjective)
Extraversion vs. introversion	Gregariousness (sociable) Assertiveness (forceful) Activity (energetic) Excitement-seeking (adventurous) Positive emotions (enthusiastic) Warmth (outgoing)
Agreeableness vs. antagonism	Trust (forgiving) Straightforwardness (not demanding) Altruism (warm) Compliance (not stubborn) Modesty (not show-off) Tender-mindedness (sympathetic)
Conscientiousness vs. lack of direction	Competence (efficient) Order (organized) Dutifulness (not careless) Achievement striving (thorough) Self-discipline (not lazy) Deliberation (not impulsive)
Neuroticism vs. emotional stability	Anxiety (tense) Angry hostility (irritable) Depression (not contented) Self-consciousness (shy) Impulsiveness (moody) Vulnerability (not self-confident)
Openness vs. closedness to experience	Ideas (curious) Fantasy (imaginative) Aesthetics (artistic) Actions (wide interests) Feelings (excitable) Values (unconventional)

For more information about the Big Five, visit this website:
http://www.uoregon.edu/~sanjay/bigfive.html#where

Here are a number of characteristics that may or may not apply to you. For example, do you agree that you are someone who *likes to spend time with others*? Please write a number next to each statement to indicate the extent to which **you agree or disagree with that statement.**

1 Disagree Strongly	2 Disagree a little	3 Neither agree nor disagree	4 Agree a little	5 Agree strongly

I am someone who…

1. _____ Is talkative
2. _____ Tends to find fault with others
3. _____ Does a thorough job
4. _____ Is depressed, blue
5. _____ Is original, comes up with new ideas
6. _____ Is reserved
7. _____ Is helpful and unselfish with others
8. _____ Can be somewhat careless
9. _____ Is relaxed, handles stress well.
10. _____ Is curious about many different things
11. _____ Is full of energy
12. _____ Starts quarrels with others
13. _____ Is a reliable worker
14. _____ Can be tense
15. _____ Is ingenious, a deep thinker
16. _____ Generates a lot of enthusiasm
17. _____ Has a forgiving nature
18. _____ Tends to be disorganized
19. _____ Worries a lot
20. _____ Has an active imagination
21. _____ Tends to be quiet
22. _____ Is generally trusting
23. _____ Tends to be lazy
24. _____ Is emotionally stable, not easily upset
25. _____ Is inventive
26. _____ Has an assertive personality
27. _____ Can be cold and aloof

28. _____ Perseveres until the task is finished

29. _____ Can be moody

30. _____ Values artistic, aesthetic experiences

31. _____ Is sometimes shy, inhibited

32. _____ Is considerate and kind to almost everyone

33. _____ Does things efficiently

34. _____ Remains calm in tense situations

35. _____ Prefers work that is routine

36. _____ Is outgoing, sociable

37. _____ Is sometimes rude to others

38. ___ Makes plans and follows through with them

39. _____ Gets nervous easily

40. _____ Likes to reflect, play with ideas

41. _____ Has few artistic interests

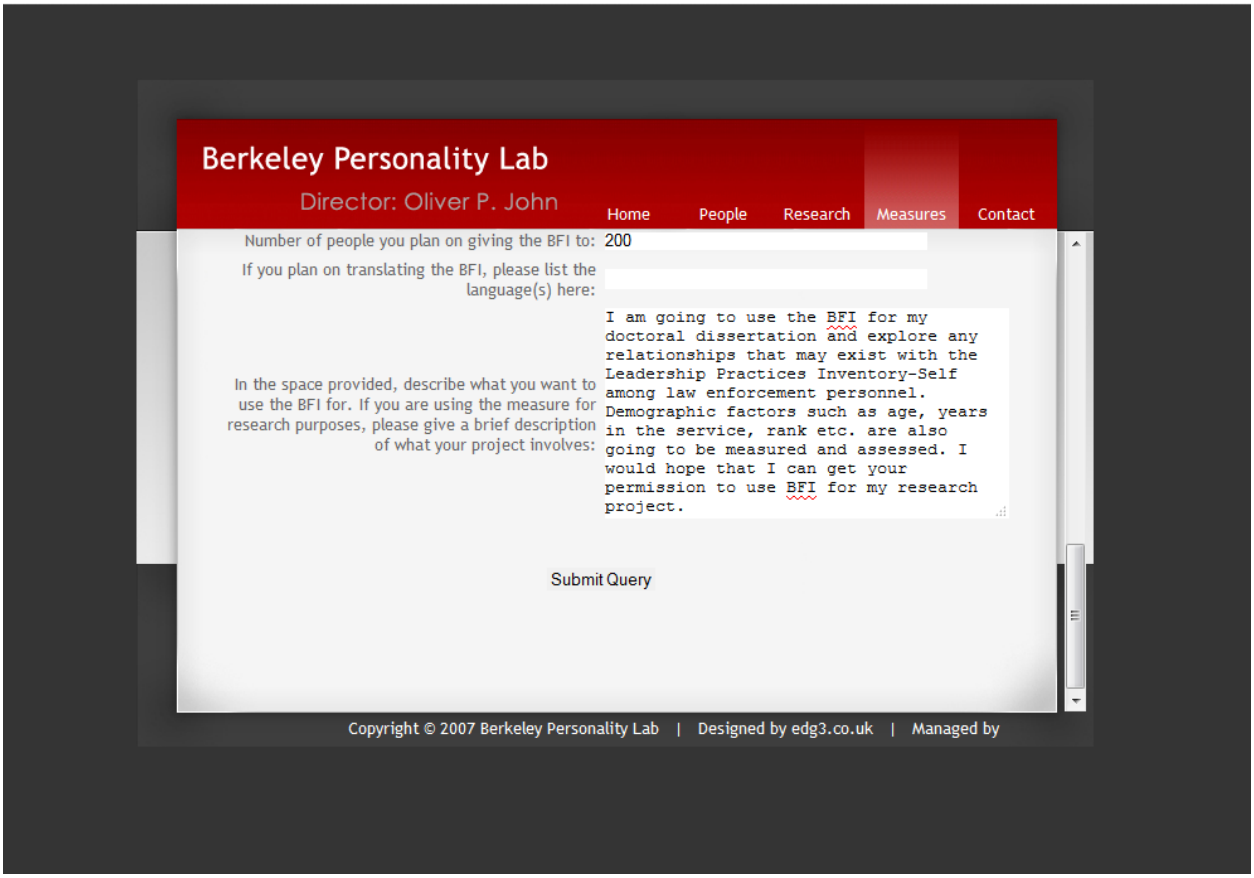
42. _____ Likes to cooperate with others

43. _____ Is easily distracted

44. ____ Is sophisticated in art, music, or literature

Appendix D

Contact Letter for the Use of the Big Five Inventory Survey



Appendix E

General Trust Scale (GTS)

Using the following scale, please indicate how much you agree or disagree with the following statements. Choose the response number that best applies to each statement.

1 *Strongly Disagree*	2 *Disagree*	3 *Neutral*	4 *Agree*	5 *Strongly Agree*

1) Most people are basically honest ☐
2) Most people are trustworthy ☐
3) Most people are basically good and kind ☐
4) Most people are trustful of others ☐
5) I am trustful ☐
6) Most people will respond in kind when they are trusted by others ☐

Appendix F

Demographic Information

1. **What is your department of employment?**

   UNRPD ☐ SPD ☐ RPD ☐ SHERIFF'S DPT. ☐

2. **What is your gender: Male ☐ Female ☐**

3. **How many years have you been working in law enforcement?**

   1-5 ☐ 6-10 ☐ 11-20 ☐ 21+ ☐

4. **What is your level of education? High School Graduate/GED ☐**

   Trade/technical/vocational training ☐

   College Graduate ☐

   Graduate Studies ☐

5. **What is your rank: Ranked Officer ☐ Unranked Officer ☐**

6. **How many years did you serve in the military?**

   N/A ☐ 2-4 ☐ 5-6 ☐ 7+ ☐

7. **What is your marital status? Single, never married ☐**

   Married or domestic partnership ☐

   Widowed ☐

   Divorced ☐

   Separated ☐

Appendix G

Formulas to Calculate the Standardized Scores of the LPI

The LPI tool consists of 30 statements, with six statements measuring each of the five practices. Each of the 30 statements is rated on a 10-point Likert-type scale: (1) Almost Never, (2) Rarely, (3) Seldom, (4) Once in a While, (5) Occasionally, (6) Sometimes, (7) Fairly Often, (8) Usually, (9) Very Frequently, and (10) Almost Always (Kouzes & Posner, 2013).

1. Sum the school item scores as follows:
    a. Challenge the Process: 1+6+11+16+21+26
    b. Inspire a Shared Vision: 2+7+12+17+22+27
    c. Enable Other to Act: 3+8+13+18+23+28
    d. Model the Way: 4+9+14+19+24+29
    e. Encourage the Heart: 5+10+15+20+25+30
2. Highest score possible for all subscales was 60 (6 X 10 = 60)
3. Utilize the norm referenced table of means and standard deviations:

Normative Means and Standard Deviations for the Leadership Practices Inventory

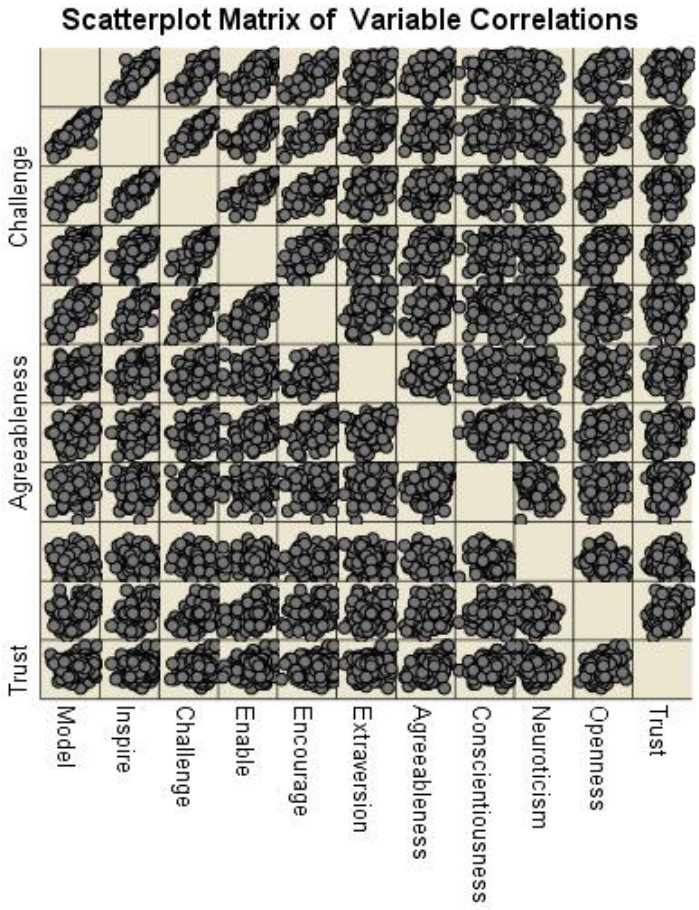
Practice	Mean	Standard Deviation
Model the Way	46.79	9.42
Inspire a Shared Vision	44.61	11.08
Challenge the Process	44.86	10.03
Enable Others to Act	50.21	8.66
Encourage the Heart	46.21	11.13

Source:

Kouzes, J. M., & Posner, B. Z. (2013). *Leadership practices inventory: Observer* (4th ed.). San Francisco, CA: Wiley.

Kouzes, J. M., & Posner, B. Z. (1988). *Leadership practices inventory (LPI): Trainer's manual.* San Diego, CA: Pfeiffer & Company.

Appendix H


Scatterplot Matrix of Variable Correlations
Challenge
Agreeableness
Trust
Model
Inspire
Challenge
Enable
Encourage
Extraversion
Agreeableness
Conscientiousness
Neuroticism
Openness
Trust

Appendix I

Institutional Review Board Approval

University of Nevada, Reno

Research Integrity
218 Ross Hall / 331,
Reno, Nevada 89557
775.327.2368 / 775.327.2369 fax
www.unr.edu/research-integrity

DATE:	May 29, 2019
TO:	Bill Thornton, PhD
FROM:	University of Nevada, Reno Institutional Review Board (IRB)
PROJECT TITLE:	[1441201-1] A Quantitative Investigation of Police Officers' Self-Reported Leadership Practices, Trust, and Personality Traits
REFERENCE #:	Social Behavioral
SUBMISSION TYPE:	New Project
ACTION:	DETERMINATION OF EXEMPT STATUS
REVIEW TYPE:	Exempt
DECISION DATE:	May 29, 2019
REVIEW CATEGORY:	Exemption Category # 2

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An IRB member has reviewed this project and has determined it is EXEMPT FROM IRB REVIEW according to federal regulations. Please note, the federal government has identified certain categories of research involving human subjects that qualify for exemption from federal regulations.

Only the IRB has been designated by the University to make a determination that a study is exempt from federal regulations. The above-referenced protocol was reviewed and the research deemed eligible to proceed in accordance with the requirements of the Code of Federal Regulations on the Protection of Human Subjects (45 CFR 46.101).

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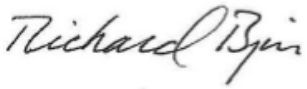
Reviewed Documents

- Advertisement - DK Letter of contact to police.docx (UPDATED: 05/16/2019)
- Application Form - DK Exemption Core Application Research with Participants 013119-13-8.docx (UPDATED: 05/16/2019)
- Consent Form - DK Information Sheet-Consent Form.docx (UPDATED: 05/16/2019)
- Questionnaire/Survey - DK LPI.docx (UPDATED: 05/16/2019)
- Questionnaire/Survey - DK BFI.doc (UPDATED: 05/16/2019)
- Questionnaire/Survey - DK Demographics.docx (UPDATED: 05/16/2019)
- Questionnaire/Survey - DK General Trust Scale.docx (UPDATED: 05/16/2019)
- University of Nevada, Reno - Part I, Cover Sheet - University of Nevada, Reno - Part I, Cover Sheet (UPDATED: 05/16/2019)

If you have any questions, please contact Nancy Moody at 775.327.2367 or at nmoody@unr.edu.

NOTE for VA Researchers: You are not approved to begin this research until you receive an approval letter from the VASNHCS Associate Chief of Staff for Research stating that your research has been approved by the Research and Development Committee.

Sincerely,



Richard Bjur, PhD
Co-Chair, UNR IRB
University of Nevada Reno

Janet Usinger, PhD
Co-Chair, UNR IRB
University of Nevada Reno

This letter has been electronically signed in accordance with all applicable regulations, and a copy is retained within University of Nevada, Reno IRB's record.

Appendix J

Introductory Letter of Participation

Dear Chief,

My name is Dimitrios Kyriakou and I am pursuing a PhD in Educational Leadership at the University of Nevada, Reno. I am interested in the study of law enforcement. Specifically, I am interested in leadership practices, community policing, trust, and personality traits of law enforcement officers.

Police officers and Sheriff's Deputies are a part of the *law enforcement community*. At the same time, a very common motto is that their work in the community to *protect and serve.* On one hand, law enforcement suggests that they are authority figures who make sure that laws are followed; on the other hand, to *protect and serve* suggests that they are benevolent members of the community. There is an inherent tension in these two concepts and which one *wins* goes back and forth, depending upon the political climate of the time.

To these ends, I would be honored and privileged to be able to administer a survey to record the perspectives of your officers on community leadership practices, trust and personality traits. The survey will be anonymous; I estimate that it will take approximately 20 minutes to complete the survey. With the support of my doctoral committee and your assistance, I strongly believe that I can produce a valuable quantitative study that can be of practical application for your organization.

Attached are a brief description of the study, a copy of the survey, a copy of my curriculum vitae. I would like to explain the study to you in detail as appropriate and to develop a proposed timeline. I would like to thank you beforehand for your time and consideration of my request. Please feel free to contact me via email dkyriakou@unr.edu or telephone at 775-247-3117.

Respectfully,

Dimitrios Kyriakou

Appendix K

Information Sheet and Informed Consent

Information Sheet
University of Nevada, Reno
Social Behavioral or Educational Research Information Sheet

Title of Study: A Quantitative Investigation of Police Officers' Self-Reported Leadership Practices, Trust, and Personality Traits
Principal Investigator: Billy W. Thornton Ph.D. 775-682-9096
Co-Investigator: Dimitrios Kyriakou, M.A. 775-247-3117

You are being invited to participate in a research study. The purpose of the study is to investigate the self-reported leadership practices, general trust, and personality traits of law enforcement officers. The study aims to assess; 1) if there are differences on self-assessed leadership practices and Trust across demographic variables, and 2) if there are differences on self-assessed leadership practices and trust across personality traits. You are being invited to participate because you are a fully sworn officer that served at least six months in the law enforcement.

If you volunteer in this study, you will be asked to fill out three-part survey and a demographic information sheet. You will do this either on paper or via a link that will be provided to you. The survey questions will focus on self-assessed leadership practices as a community leader, general trust beliefs, and personality traits. The study will be anonymous and confidential.

This study is considered minimal risk of harm. This means the risks of your participation in the research are similar in type or intensity to what you encounter during your daily activities. You may experience discomfort although the questions are anonymous, and they do not go beyond asking your perception of your own abilities. Your participation in this study is completely voluntary. You may stop at any time. Declining to participate or stopping your participation will not have any negative effects on you, or your department.

We cannot promise that participating in the study will benefit you, but we hope to gain a better understanding of self-assessed leadership, practices, trust and personality traits of law enforcement officers.

We will treat your identity with professional standards of confidentiality and protect your private information to the extent allowed by law. We will not use your name or other information that could identify you in any reports or publications that result from this study. The researchers, and the University of Nevada, Reno Social Behavioral Institutional Review Board will have access to your responses.

At any time, if you have questions about this study or wish to report an injury that may be related to your participation in this study, contact Bill W. Thornton at 775-682-9096 or Dimitrios Kyriakou at 775-247-3117. You may discuss a problem or complaint or ask about your rights as a research participant by calling the University of Nevada, Reno Research Integrity Office at (775) 327-2368. You may also use the online Contact the Research Integrity Office form available from the Contact Us page of the University's Research Integrity Office website.