

AN INVESTIGATION OF LAW ENFORCEMENT OFFICER BACKGROUND AND
PERSONALITY: A STUDY OF THE EFFECTS OF EDUCATION AND TIME IN SERVICE
ON PERSONALITY CHARACTERISTICS

by

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Liberty University

A Dissertation Presented in Partial Fulfillment
Of the Requirements for the Degree
Doctor of Philosophy in Criminal Justice

Liberty University

2023

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Abstract

Within the last ten years, the actions of law enforcement officers have received increased attention, particularly in events involving disproportionate use of force. However, researchers and individuals should not generalize all law enforcement officers based on these incidents. In other words, the actions of law enforcement officers in these incidents should not be used as a basis to predetermine the actions of all law enforcement officers. Therefore, examining law enforcement officers' personalities and backgrounds is one way to understand individual police officers better. Through an exploratory research study, the researcher was able to examine the effect education and time in service have on the personality characteristics of police officers. For this study, the researcher focused primarily on the personality traits, empathy and conscientiousness. The hypothesis for the study was that highly educated, experienced officers would have higher levels of empathy and conscientiousness. The researcher gathered data for the study from 15 different Virginia police departments. The researcher asked participants to complete the Interpersonal Reactivity Index and the Unfolding Five Factor Model Inventory Conscientiousness Scale. The researcher measured empathy through the Interpersonal Reactivity Index and conscientiousness through the Unfolding Five Factor Model Inventory. The researcher ran four one-way ANOVAs to analyze if empathy and conscientiousness were affected by education and time in service. The researcher also conducted two two-way ANOVAs to study the combined effect of education and time in service on empathy and conscientiousness. The effect size was determined through eta and partial eta squared. Overall, empathy and conscientiousness are essential parts of personality and being a law enforcement officer.

Keywords: personality, empathy, conscientiousness, education, time in service

Acknowledgments

I cannot fully convey my appreciation to my committee chair, Dr. Kristin Ford, for her never-ending patience and helpful feedback. I also could only have started the dissertation process with my dissertation reader, Dr. Gerald Green, who provided knowledge and expertise. Lastly, I would like to thank my family. Their support and confidence in me helped improve my confidence and motivation during this journey.

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List of Abbreviations

Analysis of Variance (ANOVA)

California Psychological Inventory (CPI)

Cognitive and Behavioral Therapy (CBT)

Cognitive Remediation Therapy (CRT)

Empathy Quotient (EQ)

Fisher Least Significant Difference (Fisher LSD)

Five-Factor Model (FFM)

Institutional Review Board (IRB)

Interpersonal Reactivity Index (IRI)

Unfolding Five Factor Model Inventory (UFFM-I)

Openness, Conscientiousness, Extraversion, Agreeableness, Neuroticism (OCEAN)

Statistical Package for Social Sciences (SPSS)

Uniform Crime Report (UCR)

CHAPTER ONE: INTRODUCTION

Overview

The study, which examined law enforcement officers' characteristics and personality traits, followed a logical approach. The researcher divided Chapter One into six sections. Section one, background, contained a concise overview of the research related to the topic of interest. Section two, the problem statement, addresses how previous research must thoroughly address the issue. Section three, purpose statement, provides a brief overview of how the researcher plans to address the problem by conducting the study. Section four, the significance of the study, further addresses how the study answers a critical issue. Section five, research questions, lists the research questions the study will answer. Lastly, section six, definitions, defines the terms significant to the study.

Background

The deaths of George Floyd, Michael Brown, and many other African Americans have put police behavior at the center of media and public attention. According to the Federal Bureau of Investigations, in 2022, a little over 1,200 individuals were killed by law enforcement officers (Mitchell, 2023). As a result, the actions and behaviors of some law enforcement officers are being generalized to characterize all police officers by the media. Weitzer (2018) proposed that one reason why law enforcement officers' actions and behaviors are being generalized is the increased incidents of police brutality (Weitzer, 2018). The generalization of law enforcement behavior also results in confirmation bias. Individuals looking only for evidence supporting existing beliefs experience confirmation bias (Howard, 2019; Weitzer, 2018). According to Lawrence (2022), incidents of police brutality being broadcasted by the media have increased the number of riots, protests, and distrust in law enforcement officers. As a result of these incidents,

researchers have conducted studies to research the public's opinion toward law enforcement officers. In particular, multiple studies have been undertaken to examine how current general perceptions of individual law enforcement officers have been affected by incidents of police brutality.

One study by Weitzer (2019) studied how multiple police transgressions committed in New York City and Los Angeles impact the public's attitude toward law enforcement officers. The researcher examined the public's opinion before and after the incidents. Results of the study found that the public's opinion, particularly levels of trust, decreased after the incidents of police misconduct. Another study researched how the media influence public perception of law enforcement officers. The study's results found that the public views law enforcement officers as racist, untrustworthy, and not dependable (Dowler & Zawilski, 2018). To further expand on law enforcement officers being viewed as racist, one study was conducted to research how race influenced perceptions of police brutality. The results of the study found that race is a significant factor in the creation of perceptions of police brutality (Graziano et al., 2018). According to Graziano et al. (2018), African Americans and Hispanics are more likely to report incidents of police brutality. Overall, there are multiple indications of police bias, which results in a generalization of law enforcement officer behavior (Dowler & Zawilski, 2018; Weitzer, 2019). However, according to the Bureau of Justice Statistics, in 2021, there were a little over 663,000 sworn law enforcement officers in the United States (Marshall, 2022). Therefore, generalizing all law enforcement officers in a particular way is inaccurate. While each law enforcement officer is a member of a police department, each officer is complex and unique. Current research into this topic has focused on how studying the uniqueness of individual law enforcement officers could decrease the generalization and confirmation bias of police officers.

The presence of a diverse and unique police force is of paramount importance to law enforcement organizations. Research by Legewie and Fagan (2018) underscores the role of diversity and uniqueness in fostering trust and reducing incidents of police misconduct. One effective strategy to enhance this diversity and uniqueness is to increase the representation of females and minorities in law enforcement (Hong, 2018). However, while this is a significant step, it is equally important to recognize and cultivate other qualities that contribute to the uniqueness of law enforcement officers. One such quality is their individual personality traits.

Personality traits can help determine how law enforcement officers process emotion. Mainly, how law enforcement officers process the emotions of victims, offenders, and other officers is determined by personality traits. One study was conducted to research which personality traits are most beneficial for law enforcement officers to have been conversing with victims. Results of the study found that it is helpful for law enforcement officers to exhibit empathy and conscientiousness when speaking with victims (Helfgott et al., 2023). Personality traits can also be utilized to determine how a law enforcement officer would respond to different situations. A career in law enforcement often puts police officers in dangerous and stressful situations. One study by Laguna et al. (2018) was conducted to research if experience affects levels of authoritarian traits in law enforcement officers. Signs of an authoritarian personality include dominant, hostile, cynical, and fearless (Duckitt, 2018; Laguna et al., 2018). Results of the study found that law enforcement officers with less experience, less than five years, were likelier to exhibit authoritarian personality traits (Laguna et al., 2018). Overall, when engaging in stressful situations, it is essential for law enforcement officers to be able to rationalize, remain composed, keep an even temper, keep patient, and exhibit a high level of tolerance (Lawrence, 2018). Overall, it is crucial to understand the causes of generalization and confirmation bias and

how law enforcement officers' uniqueness, particularly personality, can decrease these two aspects. This can further be achieved through a theoretical background into the issue.

Theoretical Background

Three theories explain how only a few law enforcement officers commit acts of police brutality. The three theories also argue that these acts of police brutality are only committed against certain types of citizens. The first theory is social conflict theory. Social conflict theory focuses on the relationship between different groups of individuals throughout society. Social conflict theory focuses on two types of individuals in any social framework: those with access to power and those without (Oberschall, 1978). According to Holmes et al. (2008), one function of the police is to uphold the status quo of inequality, support the powerful, and exploit the powerless. Social conflict theory also argues how race and class determine the dynamics of police-civilian interactions. One study, utilizing the framework of social conflict theory, discovered that when compared to Caucasians, African Americans and Hispanics have significantly higher contact with law enforcement (Petrocelli et al., 2019).

The second theory that correlates with police brutality is the symbolic interactionism theory. Symbolic interactionism theory focuses on how the meaning individuals assign to things could influence behavior (Jeon, 2004). According to Anderson et al. (2022), minority groups and law enforcement officers are likely to view each other as rule violators and oppressors. This is the result of increased incidents of police brutality (Anderson et al., 2022). The last theory that correlates with police brutality is the control balance theory. Control balance theory emphasizes that everyone is inertly exposed to control and actively exercises control over others (Hickman et al., 2001). It is when law enforcement officers are exercising control over others that often results in incidents of police brutality. Social conflict theory, symbolic interactionism theory, and

control balance theory explain why some law enforcement officers are involved in deviant behavior at specific times and contexts (Anderson et al., 2022; Chaney & Robertson, 2019; Petrocelli et al., 2019).

Police brutality has emerged as a significant issue within the United States, with the relationship between police officers and citizens becoming increasingly strained due to heightened media attention. This strained relationship, a matter of grave concern, has led to the generalization and confirmation bias of law enforcement officer behavior. To counter these biases, researchers have conducted numerous studies into the unique aspects of police officers. Notably, current studies have begun to focus on police behavior, underscoring the profound societal implications of this research.

Problem Statement

Police behavior is a relatively new field of study. It was not until the 1980s that society and scholars deemed police behavior a social issue (Riksheim & Chermak, 2017). It was not until after the 1980s that research into police behavior increased. A study by Cruse and Rubin (2017) cited the controlling nature of police officer behavior as one of the urgent reasons why researchers need to conduct more research into police behavior. Initially, the different types of police behaviors were the main focus of police behavior research. As a result, four different types of police behavior have been identified. The four types of police behavior are service activities, detection activities, use of arrest/citations, and use of force (Riksheim, 2017). Within the last two decades, research has also focused on determining what causes police behavior. While this area of police behavior research has expanded, other areas still need to be studied.

Previous researchers have only focused on specific causes when studying police behavior. According to Riksheim (2017), researchers have determined that the causes of police

behavior can be divided into two groups: situational and community. As a result of only focusing on these two causes, researchers have understudied other causes of police behavior. As a result, researchers have determined that organization is another cause of police behavior. One of the reasons why researchers have ignored the other causes of police behavior is the minimal research conducted on the topic. According to Lee et al. (2018), it was not until the last two decades that scholars began to acknowledge that law enforcement departments' organization significantly influences law enforcement officers' behavior. Researchers found that chain command supervisors influence police officer behavior (Lee et al., 2018). However, another understudied area is how individual factors affect police behavior. Furthermore, limited research has been conducted on how the personality of law enforcement officers is affected by the different individual factors.

When researching the literature on individual factors, many studies focused on how age, sex, time in service, and education affect the behavior and personality of law enforcement officers. However, within these studies, researchers only studied the factors separately. One study researched the effect age has on police officer behavior. The behavior of police officers studied by Brown et al. (2019) involved the exercise of authority, the decision to arrest, and the excessive use of force. The study results found that police officers older than 30 are more likely to exercise authority and engage in excessive use of force (Brown et al., 2019). According to Brown et al. (2019), the study's results found that police officers under 30 are more likely to decide to arrest suspects. Another study conducted by DeJong (2017) researched the effect sex has on police officer personality. The study's results found that female police officers exhibit higher levels of empathy when confronting victims (DeJong, 2017). As a result of studying individual factors separately, a limited number of studies have been conducted to research how

different combinations of individual factors influence law enforcement officers' behavior and personality. Therefore, this study focused on the combined effects of education and time in service of law enforcement officers. Notably, this study researched the impact of education and time in service on law enforcement officers' levels of empathy and conscientiousness.

Law enforcement officers who have high levels of empathy will exhibit different characteristics. According to Chismar (2017), these characteristics include being observant, having high self-esteem, needing to search for facts, and being able to understand the feelings and behaviors of others. Law enforcement officers with high conscientiousness levels will also exhibit different characteristics. According to Robert et al. (2018), these characteristics include being orderly, committed, self-restraining, successful, and evaluating situations before making decisions (Robert et al., 2018). Overall, the behavior and personality of law enforcement officers could be influenced by many factors. However, more research needs to be conducted on police behavior to ensure individuals understand the factors that could influence law enforcement officers' behavior and personality.

Purpose of Study

The public's viewpoint of law enforcement officers has changed in the last decade. With increased media attention on incidents of police brutality, the public and the media have started to view all law enforcement officers as racists and criminals (Godnin, 2017). In other words, the media and the public have started to generalize law enforcement officers. However, law enforcement officers can only be generalized into an individual category (Goodin, 2017). Therefore, researchers can utilize multiple factors to better understand a single law enforcement officer. One factor that a researcher can utilize is personality. As stated before, according to Inzunza (2017), helpful, empathic, dependable, and conscientious are some of the ideal

personality traits of law enforcement officers. However, the personality of law enforcement officers could be affected by various factors. For example, individual characteristics could jeopardize a law enforcement officer's personality (Beutler et al., 2017). Therefore, this study focuses on personality traits and how different individual characteristics affect those traits. The personality traits the study will focus on are empathy and conscientiousness. Furthermore, the individual characteristics the study will focus on are level of education and time in service.

The study's primary purpose is to increase research into law enforcement officers' personalities. The proposed quantitative study would focus on the individual and combined effect level of education and time in service have on levels of empathy and conscientiousness within law enforcement officers. The independent variables were level of education and time in service. The operational definition of education is the level of completed qualification reported for an individual in any field of study (Harel & Koichu, 2018). The operational definition of time in service is the time between being sworn in and retiring from the police force. The dependent variables were levels of empathy and conscientiousness. The operational definition of empathy is the capacity of an individual to think, feel, and understand the emotions of other individuals (Hall & Schwartz, 2019). The operational definition of conscientiousness is the tendency to be responsible, organized, and hardworking (Perry et al., 2018). The study participants were law enforcement officers from 15 police departments throughout Virginia.

Significance of the Study

The present study is significant because it addresses how individual characteristics impact the personality traits of law enforcement officers. Understanding how individual factors affect the personality of law enforcement officers is critical in decreasing the generalization and confirmation bias of police officers. Personal characteristics include age, gender, education, and

work experience (Tai et al., 2018). However, previous research on this issue only focused on one individual characteristic. Notably, previous research studied how only one particular characteristic affects personality. For example, Tai et al. (2018) conducted a study to research how gender affects empathy. The results of the study found that females have significantly higher levels of empathy than males (Tai et al., 2018). Another study was conducted to research how age affects the Big Five Personality Traits: openness, conscientiousness, extraversion, agreeableness, and neuroticism. The study's results found that age significantly impacted openness, empathy, and neuroticism (Franco & Prata, 2019). The last study researched how education affects the Big Five Personality Traits. The study's results found that education significantly impacted levels of conscientiousness and empathy (Mammadov, 2022). While each study expanded on the topic of interest, limitations remained.

The major limitation of the studies discussed above was that the researchers only studied one individual characteristic. Therefore, this study will contribute to the existing literature by examining how multiple individual characteristics have a singular and combined effect on personality. In particular, this study researched how education and time in service, individually and combined, affect levels of empathy and conscientiousness in law enforcement officers. Overall, this study's results will benefit law enforcement organizations when making hiring decisions. According to Sherman (2018), understanding how individual characteristics impact personality traits will help ensure that the individuals hired will benefit the law enforcement organization (Sherman, 2018). Utilizing this knowledge during the hiring process will also decrease the number of police brutality incidents, which will also reduce the generalization and confirmation bias of law enforcement officers (Sherman, 2018).

Research Questions

The researcher addressed the following research questions in the study:

RQ1: *Does the level of education affect the levels of empathy within law enforcement officers?*

RQ2: *Does the level of education affect the levels of conscientiousness within law enforcement officers?*

RQ3: *Does time in service affect the levels of empathy among law enforcement officers?*

RQ4: *Does time in service affect the levels of conscientiousness within law enforcement officers?*

RQ5: *Does the level of education and time in service have a combined effect on levels of empathy within law enforcement officers?*

RQ6: *Does the level of education and time in service have a combined effect on levels of conscientiousness within law enforcement officers?*

Definitions

1. *Achievement-Striving* – Tendency to desire success (Jeong et al., 2021).
2. *Authoritarian Personality* - Identifies authority as an individual or institution with certain rights to command obedience (Duckitt, 2018).
3. *Big Five Personality* – The theory of five broad personality traits: openness, conscientiousness, extraversion, agreeableness, and neuroticism (Mammadov, 2022).
4. *Burnout* – Exhaustion of physical and/or emotional strength due to prolonged stress (McCarty et al., 2019).
5. *Cautiousness* - Behavior that avoids risk (Schmidt et al., 2018).
6. *Cognitive Behavioral Therapy* - is a form of psychological treatment that helps individuals understand the thoughts and feelings that impact behaviors (Kazantzis et al., 2018).

7. *Cognitive Remediation* – behavioral treatment for individuals who experience cognitive impairments that interfere with everyday functioning (Reser et al., 2019).
8. *Conformation Bias* – Logical fallacy where one seeks evidence to confirm existing beliefs (Johnson, 2020).
9. *Conscientiousness* - The tendency to respond in a certain way under specific circumstances (Perry et al., 2018).
10. *Control Balance Theory* – The degree to which others and surroundings can limit an individual's behavioral options (Hickman et al., 2001).
11. *Dedication* – The quality of being committed to a task or purpose (Liu et al., 2017).
12. *Dutifulness* – Feeling a strong sense of moral obligation and/or duty (Beitelspacher & Getchell, 2023).
13. *Education* – The process of receiving systematic instruction through a school or university (Harel & Koichu, 2018).
14. *Empathy* – Ability to sense the emotions of other individuals (Hall & Schwartz, 2019).
15. *Empathic Concern* – Cognitive ability that allows individuals to care for others (Jambon et al., 2019).
16. *Exploratory Research* – Research designed and utilized to study an issue that has not been clearly defined (Armstrong, 2017).
17. *Fantasy* – Activity of imagining things (Beres & Arlow, 2019).
18. *Generalization* – Common properties of a particular instance are formulated as a general concept or claim (Gomm et al., 2019).
19. *Interpersonal Reactivity Index (IRI)* – Measures empathy through four seven-item subscales (Chrysikou & Thompson, 2017).

20. *Job Retention* - an organization's ability to prevent employees from quitting (Sabbagha et al., 2018).
21. *Job Satisfaction* – Positive emotional response an individual experiences when doing their job (Aydogmus et al., 2018).
22. *Metacognition* – Awareness and understanding of one's thought processes (Norman et al., 2019).
23. *Orderliness* - A preference for routines, deliberation, and detail orientation (Roberts et al., 2017).
24. *Use of Force* – Any physical or mechanical intervention utilized by an individual to protect, influence, dominate, detain, or overpower the struggle of another individual (Friedrich, 2018).
25. *Personal Distress* – Adverse physical or emotional response (Decety & Lamm, 2019).
26. *Personality* – The qualities or characteristics that, when combined, form an individual's distinctive character (Feist & Roberts, 2019).
27. *Perspective-taking* – A cognitive phenomenon that allows individuals to understand the viewpoints of others (Stietz et al., 2019).
28. *Police* – Individuals who uphold the rule of law and ensure the rights of citizens are protected (Brown et al., 2019).
29. *Revictimization* – To victimize an individual again (Parti, 2022).
30. *Self-Discipline* – Ability to control one's behaviors and feelings (Schmidt et al., 2018).
31. *Self-Efficacy* - Refers to the belief that an individual can engage in actions essential to result in specific performance achievements (Eller et al., 2018).

32. *Social Conflict Theory* – Sociological theory that portrays the relationship between different groups of individuals in society (Oberschall, 1978).
33. *Symbolic Interactionism Theory* – Social theoretical framework that proposes that the repeated actions of other individuals influence individuals (Jeon, 2004).
34. *Time in Service* - Amount of time an individual has been an employee of any organization (Wachi et al., 2017).
35. *Traits Theory* – Proposes that an individual's personality comprises multiple personality traits (Kernberg, 2017).
36. *UFFM-I Conscientious Scale* – Measures the six facets of conscientiousness (Baker & Moyer, 2019).
37. *Quantitative Research* – The collection and analysis of numerical data (Sukamolson, 2017).

CHAPTER TWO: LITERATURE REVIEW

Overview

Chapter Two is divided into three sections. Section one, the theoretical framework, provides a more in-depth discussion of the theory of the research study. Section two, strategy for searching for literature, describes how the background research was gathered and incorporated into the dissertation. As stated before, the study aims to research how the level of education and time in service affects levels of empathy and conscientiousness in law enforcement officers. Through section three, the related literature, the researcher goes more in-depth into background research relevant to the study topic. Some background research pertinent to the study topic includes personality, empathy, conscientiousness, education, and time in service.

Theoretical Framework

While personality has several theories, each describes or concentrates on the different facets of personality. Simply put, theories of personality seek to explain how personality is formed, how personality changes, and the effect personality has on behavior (Feist & Roberts, 2019). According to Feist and Roberts (2019), while some theories of personality focus on a particular area of personality, other theories research personality more broadly. Today, there are six main theories of personality. However, for the theoretical framework, the researcher will only discuss two personality theories related to the research. Trait theories are the first personality theory informing the chosen topic's literature.

Trait Theories of Personality

Under trait theories of personality, individuals have unique personality traits, and the intensity of those traits results in personality differences (Epstein, 2017). There are two commonly known Trait theories. Isabel Briggs-Myers developed the first widely known Trait theory. According to Costa and McCrae (2018), the Myers-Briggs theory proposes four continuums that are the bases for an individual's personality. The four continuums are sensing-intuition, introversion-extraversion, judging-perceiving, and thinking-feeling. From the four continuums, Briggs-Meyers outlined 16 personality types. The 16 personality types outlined were the commander, the mastermind, the visionary, the architect, the teacher, the counselor, the champion, the healer, the supervisor, the inspector, the provider, the protector, the dynamo, the craftsperson, the entertainer, and the composer (Costa & McCrae, 2018). However, many theorists believe Briggs-Meyers' 16 personality types are too broad (Costa & McCrae, 2018; Stein & Swan, 2019). From the work of Briggs and Meyers, Robert McCrea and Paul Costa developed the second commonly known Traits theory.

McCrae and Costa's Trait theory is called the Five Factor Model (FFM). Today, the five factors are commonly called the Big Five personality traits. According to Kernberg (2017), an individual's personality is created when the five core traits under the Big Five model of personality are combined. As stated, the five core personality traits are openness, conscientiousness, extraversion, agreeableness, and neuroticism. The five core personality traits are commonly known as OCEAN. Instead of being scored as present or absent, traits on the FFM are scored along a continuum, from high to low (Cobb-Clark & Schurer, 2018). Therefore, an individual can score high in empathy but low in agreeableness.

According to Pervin (2018), the main foundation of trait theories is that individuals differ based on basic trait dimensions and the strength of those dimensions. Today, three criteria characterize personality traits. The three criteria are consistency, stability, and individual differences. To be considered a personality trait, an individual's behavior associated with the trait must be consistent in numerous situations. Also, to be considered a personality trait, an individual's behavior associated with a trait must be stable over a long period. Lastly, individual differences can affect the level at which an individual engages in behaviors related to the trait (Pervin, 2018). The humanist personality theory is the second personality theory that informed the literature on the chosen topic.

Humanistic Personality Theory

Humanistic personality theory focuses on the importance of self-growth in developing healthy personality traits (Bland & DeRobertis, 2020; DeRobertis, 2020). Humanist theorists also focus on how nature or the environment influences personality. This is referred to as the nature vs. nurture debate. Previous research into personality development has found that only 25 to 55 percent of personality comes from genetics, and the rest is influenced by the environment

(Sanchez-Roige et al., 2018). From this thinking, Carl Rogers developed the humanistic personality theory.

Rogers focused on how the environment affects an individual's ability to self-actualize. Self-actualization is an individual's ability to achieve their full potential or ideal personality (Rusu, 2019). Rogers proposed that personality development was contingent on three components of self-actualization. The first component is self-image, or how individuals view themselves. The image can either be positive or negative. The second component is self-worth, or the value an individual places on themselves. The last component is the ideal self or the person an individual wants to become. An individual's environment determines the development of the ideal self. Environmental factors such as upbringing, geographic location, community, and education influence personality development (Rusu, 2019). Overall, humanistic personality theory focuses on how the uniqueness of each individual determines personality development.

Premise Behind the Study

From the premise behind trait theories, the researcher developed the current study centering around law enforcement officers. From traits theories, the researcher focused on different personality traits. In particular, this research paper focused on empathy and conscientiousness. From the humanistic personality theory, the researcher focused on how the environment can influence personality development. In particular, the researcher focused on how education influences personality development. Previous studies have found that school experiences can influence personality development (Sutherland, 2019). To situate the current research study and questions within the established theoretical framework, the researcher studied how education affects the levels of empathy and conscientiousness in law enforcement officers.

To connect the study to criminal justice, the researcher also studied the effect time in service had on the levels of empathy and conscientiousness.

Strategy for Searching for Literature

The researcher gathered background research using the Criminal Justice Database for the literature review. The researcher utilized the search term *personality*, and the database produced over 14,000 results. To narrow down the search, the researcher added multiple search terms. The search terms added include *theories of personality*, *personality traits*, *empathy*, *conscientiousness*, *aspects that affect personality*, *individual characteristics*, *education*, and *time in service*. Adding the additional search terms produced a little over 7,000 research articles. The researcher found 175 valuable articles from the Criminal Justice Database for the literature review. The researcher also utilized governmental websites to gather relevant statistics for the study. Between the five chapters, the researcher has used 194 references for the study, five of which were governmental websites, and two were PDFs.

Related Literature

Personality

Personality differences result from individual feelings, thoughts, and behaviors (Anglim et al., 2020). According to Anglim et al. (2020), the term personality, stemming from the Latin word *persona*, refers to the mask performers utilize to conceal their identities. Throughout the research, researchers have employed multiple definitions to define personality. One definition of personality is an individual's unique behavior patterns (Kernberg, 2017). These patterns of behavior include deliberate, routine, and involuntary unintentional behaviors. Another definition of personality is an individual's distinctive character, which results from a combination of

different characteristics (McCrae, 2017). Lastly, personality is defined by the American Psychological Association as individual uniqueness resulting from differences in thinking, feelings, and behavior (Cheung et al., 2017). While the term personality has multiple definitions, a majority of the definitions address how an individual's unique character is developed based on behaviors and characteristics.

Personality Characteristics

Four aspects make up a personality. The first aspect is consistency. As stated before, an individual must consistently engage in the same behaviors related to the traits. One longitudinal study was conducted to research the consistency and change in individuals. Results of the study found that participants were consistent in engaging in behaviors related to empathy but not in behaviors related to neuroticism for two years (Beck & Jackson, 2020). The second aspect is how personality is affected both psychologically and physiologically. One study was conducted to research how six-week mindfulness-based interventions impacted the personality of law enforcement officers. The study's results found that the intervention benefitted the participants who were more open and neurotic than the other three core personality traits (Krick & Felfe, 2020). The third aspect is how personality influences how an individual responds and behaves in different situations. One study researched how personality influences how law enforcement officers respond to victims. The study's results indicated that law enforcement officers with higher levels of empathy and openness had better interactions with victims (Mummolo, 2018). The last aspect is how personality can be displayed through thoughts, feelings, close relationships, and other social interactions in addition to behavior. It is through these aspects that researchers established the different personality types.

Personality Types

There are four types of personality: Type A, B, C, and D. Individuals with Type A personalities are competitive, perfectionist, achievement-oriented, and aggressive (Freudenstein et al., 2019). Individuals with Type B personality are flexible, patient, and even-tempered (Freudenstein et al., 2019). According to Freudenstein et al. (2019), Type C personalities are individuals who struggle to show emotion and are highly conscientious. Lastly, individuals with Type D personalities are pessimistic, avoid social situations, are irritable, and lack self-confidence (Freudenstein et al., 2019).

One study was conducted to research which personality type would be ideal for law enforcement officers. The study's results found that Type A was the ideal personality type for law enforcement officers (Semrad et al., 2019). Researchers Semrad et al. (2019) propose that since there is little room for error in law enforcement, competitive, perfectionists, and organized individuals are a good fit for law enforcement. However, having a Type A personality is not beneficial to all aspects of law enforcement. For example, one study found that a Type A personality does not benefit law enforcement when interacting with victims and citizens (Falkenbach et al., 2018). Falkenbach et al. (2018) found that having Type B personalities is more beneficial for law enforcement officers when interacting with victims and citizens. It is from studying the different personality types that researchers expanded their research into the various personality traits.

Personality Traits

According to Roberts (2019), a personality trait is an individual's constant emotional and behavioral pattern. In 1936, Gordon Allport proposed the first trait theory. Gordon, while reading an English-language dictionary, found over 4,000 words that described different personality

traits (Costa & McCrae, 2018; Doremus, 2020). From those 4,000 words, Allport divided personality traits into three categories. The first category Allport refers to as cardinal traits. Allport defined cardinal traits as rare and dominating (Pervin, 2018). An example of a cardinal trait is narcissism. The second category, Allport refers to as central traits. Allport defined central traits as distinctive characteristics an individual would use to describe others (Doremus, 2020). An example of a central trait is intelligence. The last category Allport referred to as secondary traits. Allport defined secondary traits as preferences or attitudes that only appear in certain situations (Costa & McCrae, 2018; Doremus, 2020; Pervin, 2018). An example of a secondary trait is a fear of public speaking. Modern personality trait theories were developed based on Allport's trait theory.

Today, there are 818 primary personality traits; 234 are positive, 292 are neutral, and 292 are negative (Kernberg, 2017). Six examples of positive personality traits are intelligent, helpful, observant, rational, self-sufficient, and trusting. Determined, impassive, noncommittal, predictable, quiet, and whimsical are six neutral personality traits. Lastly, six examples of negative personality traits are astigmatic, blunt, crafty, fickle, insulting, and regretful. As stated before, to try and summarize the 818 primary personality traits, McCrae and Costa developed the Big Five model of personality, which is still used today. As stated before, the Big Five personality model is also called OCEAN.

Overall, individuals are shaped and influenced by personality traits. How individuals respond to different circumstances is also determined by personality traits. Therefore, individuals and researchers can utilize personality traits in several situations. For example, when an individual is applying for a job, hiring personnel can utilize personality traits to help employers predict how the individual will behave and respond to different circumstances (Mills &

Bohannon, 2018). This could be particularly useful in law enforcement. As stated before, a career in law enforcement is dangerous, stressful, and high-paced. Therefore, through personality traits, hiring personnel could determine who would make a good law enforcement officer. To study this phenomenon, one study was conducted to research the potential benefits of utilizing personality traits when hiring law enforcement officers. The study's results found that age, attitude, and personality traits were not just indicators, but strong predictors of job performance and success in law enforcement (Sanders, 2018). To expand on this study, multiple researchers have conducted studies to research the ideal personality traits of law enforcement officers.

Personality Traits of Law Enforcement Officers

Brave and heroic are often the most common personality traits utilized to describe law enforcement officers. However, while a career in law enforcement is stressful and dangerous, there are many traits beyond strength and bravery that law enforcement officers must possess to be successful. Having a career in law enforcement means an individual must be capable of upholding every part of the job (Blumberg et al., 2019). Therefore, besides having the credentials and knowledge needed to be a police officer, individuals must possess unique and admirable qualities that cannot be learned or taught. The qualities law enforcement officers must possess that cannot be learned or taught are personality traits. However, some personality traits are more beneficial to a career in law enforcement.

Bucher et al. (2019) conducted a comprehensive survey to identify the personality traits that would be most beneficial for law enforcement. Participants were presented with a list of 200 personality traits and asked to select those they believed would be advantageous in a law enforcement context. The study's findings were enlightening, with 95 percent of the participants identifying strong initiative, a sense of ethics, adept communication, even-temperedness,

common sense, patience, tolerance, kindness, knowledge, and drive as critical traits for law enforcement (Bucher et al., 2019).

Utilizing the CPI scale, two other researchers also conducted a study to research the personality traits of successful law enforcement officers. According to Mills and Bohannon (2018), the CPI scale, containing 434 items, measures social communication and interpersonal behavior. The study's results found that effective law enforcement officers exhibit helpful, respectful, empathetic, impartial, and dependable personality characteristics (Mills & Bohannon, 2018). The study's results also found that empathy and dependability were associated with effective leadership (Mills & Bohannon, 2018).

Another researcher conducted a study to determine which Big Five personality traits determine effective law enforcement officers. Sanders (2018) found that determining law enforcement effectiveness was unsuccessful when studying extroversion, agreeableness, and openness in law enforcement officers. However, the study's results indicated that law enforcement officers who exhibit conscientiousness are more effective than officers who exhibit neuroticism (Sanders, 2018). From these studies, effective law enforcement officers exhibit helpful, respectful, knowledgeable, empathetic, impartial, patient, dependable, and conscientious personality traits. However, this research study will only focus on two personality traits of effective law enforcement officers. The first personality trait that the researcher discussed is empathy.

Empathy

Throughout history, researchers have tried to define empathy or understand how an individual's feelings or thoughts change through observing others (Greenberg et al., 2018). Therefore, researchers have separated the efforts to understand and define empathy into two

categories. The first approach understands empathy to be an emotional phenomenon. In other words, according to Greenberg et al. (2018), empathy occurs when an individual shares the emotional state of others or an individual experiences an emotional state because of another individual. The last approach understands empathy to be a cognitive phenomenon. In other words, empathy is one individual's ability to determine another's emotional state without experiencing an emotional change (Greenberg et al., 2018). Today, according to Inzunza (2017), researchers define empathy as the capability to emotionally comprehend what other individuals are feeling, see things from others' viewpoints, and imagine yourself in their place.

There are three types of empathy. The first type of empathy is affective empathy. Affective empathy is understanding another individual's emotions and responding correctly (Chrysikou & Thompson, 2017). Being happy when faced with another individual's good news is an example of affective empathy. The second type of empathy is somatic empathy. According to Chrysikou and Thompson (2017), somatic empathy is a physical reaction that results from what another individual is undergoing. An example of a physical response is shivering when feeling cold. The last type of empathy is cognitive empathy. Cognitive empathy is having the ability to understand how the mental state of individuals changes as a result of different circumstances (Chrysikou & Thompson, 2017). There are also four separate aspects of empathy. The first aspect of empathy is perspective-taking.

Perspective-Taking

Perspective-taking refers to an individual's ability to recognize another individual's viewpoint (Stietz et al., 2019). While empathy addresses feelings or emotions, perspective-taking addresses the ability to understand other individuals' opinions and why the individual has those opinions. There are three steps to perspective-taking. The first step to perspective-taking is

mental flexibility. Mental flexibility refers to an individual's ability to shift thoughts in response to any situation (Stietz et al., 2019). The second step to perspective-taking is intentionality. Intentionality refers to the quality of an individual's mental state when directed to different situations or individuals (Pérez-Manrique & Gomila, 2018). After completing the first two steps, an individual will be able to adopt the viewpoints of other individuals, which is the last step to perspective-taking (Pérez-Manrique & Gomila, 2018; Stietz et al., 2019). The second aspect of empathy is empathic concern.

Empathic Concern

Empathic concern is an emotional response caused by witnessing another individual in need (Jambon et al., 2019). Empathic concern can be displayed through sympathy, tenderness, and/or compassion. According to Jambon et al. (2019), empathic concern results from two factors. The first factor that influences the development of empathic concern is perceiving when another individual is in need. The second factor is placing an intrinsic value on another individual's welfare (Batson et al., 2018). The third aspect of empathy is personal distress.

Personal Distress

Personal distress refers to individuals having the ability to feel other individuals' negative experiences (Decety & Lamm, 2019). An individual's distress can be displayed through emotions. Some examples of emotions associated with personal distress include fear, sadness, and discomfort. An individual's distress can also be exhibited physically. The most common display of personal distress is crying. The last aspect of empathy is fantasy.

Fantasy

Fantasy allows individuals to identify with characters in books, TV shows, and movies.

Fantasy associated with empathy focuses on the ability of individuals to imagine themselves in other individuals' situations (Beres & Arlow, 2019). One study found that empathy for fictional characters significantly correlates with empathy for real individuals (Nomura & Akai, 2018). Overall, knowing each of the aspects is essential to understanding empathy. However, to further understand empathy, it is also essential for individuals to be able to distinguish between empathy and sympathy.

Difference Between Empathy and Sympathy

While individuals often use empathy and sympathy interchangeably, the two concepts have one main difference. Overall, emotion is the significant difference between sympathy and empathy. Chismar (2017) defines sympathy as feeling sorry or caring about what another individual is experiencing. However, as stated before, researchers define empathy as the ability to comprehend what another individual is feeling emotionally. In other words, according to Chismar (2017), feeling anger for another individual is sympathy, and sharing an emotional event with another individual is empathy. Mapping brain waves is another way to identify the difference between sympathy and empathy correctly. In the past, through mapping brain waves, social cognitive neuroscientists have identified a location in the brain similar to the location of another individual's brain experiencing emotions (Walter, 2017). Scientists have identified this phenomenon as experiencing empathy. Therefore, according to Walter (2017), scientists have presumed that empathy is a passive process due to the ability to map the existence in an individual's brain.

Empathy as a Passive Process

Passive empathy is understanding another individual's situation, values, and needs (Jones et al., 2019; Teding & Malouff, 2017; Thompson et al., 2019). There are three stages to

experiencing passive empathy. The first stage of experiencing passive empathy is external awareness. The ability to differentiate between one's feelings and the feelings of another individual is referred to as external awareness (Teding & Malouff, 2017). The second stage is perspective-taking. According to Teding and Malouff (2017), the ability to view situations from another individual's perspective is referred to as perspective-taking. The last stage in experiencing empathy is emotion regulation. The different emotions an individual can experience and knowing how to respond to the situation is called for emotion regulation (Teding & Malouff, 2017). However, empathy is more than a passive process. Empathy can also be active.

Empathy as an Active Process

Empathy is more than external awareness, perspective-taking, and emotion regulation. Understanding others is not enough; individuals must demonstrate their understanding (Thompson et al., 2019). Therefore, unlike passive empathy, active empathy shows that an individual understands another individual's situation, values, and needs (Jones et al., 2019; Thompson et al., 2019). Overall, there are eight essential components of active empathy.

The first key component of active empathy is showing patience and a caring attitude. The second key component is active listening. Active listening can be achieved through three steps. The three steps to active listening are dropping egos and assumptions, asking open questions, and understanding fundamental terms utilized by the other individual (Jones et al., 2019). The third key component of active empathy is attention to detail. When engaging in active empathy, individuals must pay attention to reactions, body language, and expressions (Thompson et al., 2019). The fourth component of active empathy is saying what you understand, not just what you know. The fifth component is rephrasing and repeating fundamental words and ideas others express (Jones et al., 2019; Thompson et al., 2019). The sixth component of active empathy is

using words and terms the other individual uses when conversing. The seventh component is utilizing the preferred communication style when conversing with the other individual. The last key component of active empathy is collaboration. Overall, there are multiple benefits to passive and active empathy.

Benefits of Passive and Active Empathy

There are two main benefits to passive and active empathy. The first benefit is that individuals will be better positioned to successfully guide and motivate others (Weisz & Cikara, 2020). The last benefit of passive and active empathy is that individuals will develop more compassionate and caring relationships (Weisz & Cikara, 2020). Overall, empathy allows individuals to understand others better, be influential leaders, and become more empathetic. While each aspect is vital for everyone, these aspects are essential for individuals wanting to be effective law enforcement officers. Effective law enforcement officers show respect, cooperation, and understanding of other individuals, which empathy enhances (Gomez & Robertson, 2023). As a result, researchers have been focusing more on gathering information on empathy in law enforcement.

Empathy in Law Enforcement Officers

For law enforcement, protecting and serving is an honorable objective. However, facing daily dangers, horrors, and scrutiny can cause empathy to decrease or disappear in law enforcement officers (Diamond & Hogue, 2023). One researcher conducted a study to research how a decrease in empathy can negatively impact different aspects of law enforcement. From the study, Lopez (2022) identified four areas that a decline in empathy in law enforcement would negatively impact. The first area that could be negatively impacted is the de-escalation of dangerous situations. Lopez (2022) proposes that without empathy, law enforcement officers

cannot understand the feelings and motives of other individuals. This can result in law enforcement officers not being able to predict the actions of others and safely de-escalate dangerous situations. The second area that could be negatively impacted is law enforcement-community interaction. Without empathy, the distrust between law enforcement and the community will continue to increase (Lopez, 2022). There could also be an increase in racial profiling, a severe issue that needs to be addressed, which is the third area. Labels lead to snap judgments, increasing violence, and distrust (Lopez, 2022). The last area that could be negatively impacted is the prevention of deaths of both law enforcement officers and citizens. According to Lopez (2022), fear can cloud judgment without empathy and result in rash decision-making. Without empathy, law enforcement organizations can be negatively impacted in multiple areas. However, to ensure that law enforcement organizations do not experience these negative impacts, police departments can promote empathy.

Promoting Empathy in Law Enforcement

There are multiple steps in which empathy can be promoted in law enforcement. The first step in promoting empathy is to recognize that empathy needs to be utilized at all levels. When leaders of an organization demonstrate empathy, lower-level employees are also encouraged to utilize empathy (Diamond & Hogue, 2023). The second step is to recognize that any individual can make a difference. For example, when one law enforcement officer utilizes empathy when conversing with other officers, those officers will be more likely to engage in empathy. Engaging in empathy is one of the fastest ways to ensure others will also utilize empathy (Diamond & Hogue, 2023). The last step in promoting empathy is to know how to increase empathy. According to Diamond and Hogue (2023), team meetings and team-building activities are good ways to promote empathy in law enforcement. Overall, it is essential to encourage law

enforcement officers to explore and reaffirm empathy. Through promoting empathy, law enforcement organizations will experience multiple benefits. The first area in law enforcement that could benefit from empathy is victim interaction.

Victim Interaction

After a crime is committed, law enforcement officer(s) are often the first individuals victim(s) interact with after the event. After being a victim of crime, individuals are often scared, detached, and emotionally numb (Farrell et al., 2019). Therefore, because law enforcement officers directly support crime victims, officers must demonstrate passive and active empathy. Through empathy, law enforcement officers can establish trust, which is beneficial when communicating with victims (Jakobsen, 2021). One study conducted by Oxburgh and Ost (2017) researched if it would be beneficial for law enforcement officers to express empathy when interviewing sexual assault victims. Oxburgh and Ost's (2017) study found that when law enforcement officers expressed empathy, a victim's trust improved during the interviews.

Another study, utilizing a qualitative design, researched how empathy impacted rapport during interviewing crime victims. The study results found that when demonstrating empathy, victims found the officers to be more open, trustworthy, understanding, and respectful (Risan et al., 2018). The study's results also showed that victims found it easier to communicate with police officers (Risan et al., 2018). According to Jakobsen (2021), law enforcement officers create an environment that is more beneficial to communication and cooperation by demonstrating empathy when interacting with victims.

Through empathy, law enforcement officers can decrease victim blaming, also called revictimization. Revictimization in criminal justice occurs when an individual is first a victim of a crime and then becomes a victim again by the criminal justice system. According to Parti

(2022), victimization can occur through committing the crime again against the victim, blaming the victim, and/or not believing the victim that a crime occurred. The revictimization of individuals in the criminal justice system is still an issue (Deans et al., 2018). Therefore, multiple research studies have been conducted on whether empathy increases or decreases revictimization. One study found that empathy can reduce trauma symptoms and decrease revictimization (Parti, 2022). The results of Oxburgh and Ost's (2017) study also found that the feeling of revictimization in victims is reduced if law enforcement officers exhibit empathy. The second area where empathy could be beneficial is witnessing crime.

Witnessing Crime

Law enforcement officers often see the worst of humans. Some of the worst events law enforcement officers experience are murder, sexual assault, and suicide. Continuous exposure to these events can negatively impact an individual's mental health (Seely, 2019). However, continuously engaging in empathy can improve an individual's ability to effectively respond to an emotional event (Seely, 2019). Multiple studies have examined how empathy could benefit law enforcement officers when witnessing emotional events. One study found that in police officers with higher levels of empathy, psychiatrists are less likely to diagnose the officers with Post Traumatic Stress Disorder after witnessing a traumatic event (Velazquez & Hernandez, 2019). Another study found that law enforcement officers who have low levels of empathy are more likely to be diagnosed with depression (Ermasova et al., 2020). Lastly, another study found that law enforcement officers demonstrating empathy for fellow officers improves mental health and creates a feeling of partnership (Schaddelee et al., 2019). The third area where empathy could be beneficial in law enforcement is during interactions with individuals in the community.

Community Interactions

Researchers recently noted increased scrutiny, particularly by the media, into law enforcement officer behavior. This is the result of the multiple incidents of police brutality within the past couple of years. According to Alang et al. (2020), the various incidents of police brutality have led to a decrease in the levels of trust between the community and law enforcement. Recently, researchers have conducted studies to examine how empathy can improve law enforcement-community relations. One study found that when law enforcement officers listen and express understanding, citizens find the officers to be more trustworthy and effective in protecting the community (Timmons & Williams, 2019). Another study found that when law enforcement officers expressed empathy, citizens were more likely to view the interaction as fair and deserved, even when receiving a ticket (Posick et al., 2017). The last area within law enforcement that could benefit from empathy is burnout within law enforcement officers.

Burnout

As stated before, a career in law enforcement is stressful, dangerous, and fast-paced. Continued exposure to these elements could result in burnout among law enforcement officers. Law enforcement burnout is when officers experience physical and emotional exhaustion (McCarty et al., 2019). Researchers have studied how empathy affects law enforcement officers' burnout. One study by Turgoose et al. (2017) researched empathy and burnout in law enforcement officers. In particular, the study examined how empathy affects law enforcement officers' compassion, fatigue, and burnout. Turgoose et al. (2017) found a correlation between higher levels of empathy and lower levels of compassion, fatigue, and burnout. Another study by Williams et al. (2017) also researched if there was a correlation between empathy, burnout, and

personal accomplishment. The results of this study also found a correlation between high levels of empathy and lower levels of burnout. (Williams et al., 2017). The researchers also found a correlation between high levels of empathy and improved feelings of personal accomplishment (Williams et al., 2017). Overall, empathy is beneficial within multiple aspects of law enforcement.

Scales to Measure Empathy

In the studies mentioned above, the researchers measured the different aspects of empathy through other methods. Some methods utilized by the studies to measure empathy include surveys, interviews, the Empathy Quotient (EQ), and the IRI. One study by Lawrence et al. (2017) researched the reliability and validity of the EQ. The study results found that the EQ has low reliability but high validity (Lawrence et al., 2017). Another study conducted by Pélouquin and Lafontaine (2017) researched the reliability and validity of the IRI. The study results found that the IRI has high reliability and validity (Pélouquin & Lafontaine, 2017). After reviewing previous research, the researcher will measure empathy utilizing the IRI. The IRI was developed by Davis (1983) to measure empathy as a set of concepts in addition to a singular construct.

Conscientiousness

As stated before, conscientiousness is one of the Big Five personality traits (Kernberg, 2017). Conscientiousness has a long history within psychology, starting with Sigmund Freud's idea of the superego (Roberts et al., 2018). According to Frank (2017), Freud described the superego as the values and morals of a society that an individual learns from family and others in society. The values and morals learned young are essential for developing an individual's conscience and self-criticism (Frank, 2017). From Freud's idea of the superego, Roberts et al.

(2018) define conscientiousness as the ability to be goal-oriented, adhere to society's expectations for impulse control, and have the capability to postpone gratification (Roberts et al., 2018). Conscientiousness is the tendency to be meticulous, dependable, methodical, and goal-directed (Roberts et al., 2017). Therefore, meticulous, methodical, and dependable individuals are highly conscientious. However, individuals who are rash, chaotic, and thoughtless are low in conscientiousness. An example of a conscientious individual is someone who prefers order in their everyday lives instead of disorder. Overall, there are six facets to conscientiousness. The first facet of conscientiousness is self-efficacy.

Self-Efficacy

Self-efficacy is an individual's confidence in their capability to complete tasks or achieve goals. Self-efficacy encompasses an individual's self-confidence to control behavior, influence the surrounding environment, and stay motivated to reach goals (Eller et al., 2018). Everyone has goals, things they wish to change, and/or things they want to achieve. However, establishing a plan to reach goals, make changes, and/or meet achievements is difficult. According to Albert Bandura, a famous psychologist, an individual's self-efficacy plays a significant role in goals, tasks, and how individuals approach challenges (Roberts et al., 2017). Individuals with a strong sense of self-efficacy establish more profound interest and commitment in activities, recover quicker from setbacks, and do not give up when faced with challenging tasks (Eller et al., 2018). However, individuals with weak self-efficacy will avoid complex tasks, focus on personal shortcomings, and lack confidence in their abilities (Eller et al., 2018). The second facet of conscientiousness is orderliness.

Orderliness

Orderliness is associated with other qualities such as attentiveness, cleanliness, and the need for order (Roberts et al., 2017). Therefore, individuals with a strong sense of orderliness exhibit tendencies towards cleanliness, plans, and neatness. Having a strong self of orderliness helps an individual achieve goals, complete tasks, and solve challenges efficiently (Sutin et al., 2018). Through orderliness, individuals can write down what they want to accomplish, develop a plan, take action, keep perspective, and identify potential obstacles. However, an individual with a weak sense of orderliness will exhibit tendencies towards messes, disorder, and disorganization, which is counterproductive to achieving goals, tasks, and/or solving challenges (Harari et al., 2019; Sutin et al., 2018). The third facet of conscientiousness is dutifulness.

Dutifulness

Dutiful individuals are continuously looking for signs of disapproval, to be of service to others, and to demonstrate loyalty to others or an organization (Beitelspacher & Getchell, 2023). Therefore, dutiful individuals fear not being accepted and/or liked by others. Individuals with a strong sense of dutifulness have strong loyalty, duty, and moral obligations (Beitelspacher & Getchell, 2023; Harari et al., 2019). In other words, individuals who are high in dutifulness are reliable. However, according to Harari et al. (2019), individuals with a weak sense of dutifulness feel trapped by laws, rules, and regulations. In other words, these individuals are viewed as unreliable or irresponsible. The fourth facet of conscientiousness is achievement-striving.

Achievement-Striving

Achievement-striving describes behaviors associated with working towards goals. Under achievement-striving, there are five behaviors necessary to achieve goals. According to Sutin et al. (2018), the five behaviors are taking stock of current reality, defining objectives, setting goals, visualizing who you want to be, and keeping track of progress. However, some individuals

will readily participate in these five behaviors. This depends upon an individual's achievement-striving level (Sutin et al., 2018). Individuals with a strong sense of achievement continuously strive for greatness (Jeong et al., 2021). These individuals are also high achievers. Individuals with a weak sense of achievement-striving lack ambition (Jeong et al., 2021). These individuals are often labeled as lazy. Therefore, individuals with a stronger sense of achievement-striving will have an easier time engaging in these five behaviors. Overall, achievement striving is one of the most criterion-valid facets of conscientiousness (Jeong et al., 2021; Roberts et al., 2017). The fifth facet of conscientiousness is self-discipline.

Self-Discipline

Self-discipline enables individuals to push themselves, stay motivated, and take action to achieve goals, regardless of physical and/or mental hardships (Schmidt et al., 2018). Under self-discipline there are nine steps to cultivating strong self-discipline. According to Schmidt et al. (2018), the nine steps are knowing strengths and weaknesses, removing temptations, setting goals, practicing diligence daily, establishing new behaviors, changing perceptions, creating a backup plan, finding trusted mentors, and forgiving oneself. Individuals who utilize these nine steps will develop a strong sense of self-discipline. Individuals with solid self-discipline can stay on track despite distractions and are willing to continue even with complex tasks (Harari et al., 2019). However, individuals with weak self-discipline often procrastinate or fail to complete tasks. The last facet of conscientiousness is cautiousness.

Cautiousness

A cautious individual avoids rash decisions to avoid possible dangers (Schmidt et al., 2018). There are five points an individual can utilize to increase cautiousness. According to Roberts et al. (2017), the five points are thinking before acting, considering words before

speaking, following safety rules, asking permission, and being aware of the danger. Individuals who utilize these five points develop a strong sense of cautiousness. Individuals with a strong sense of cautiousness can build confidence and reduce fear by deliberating before making decisions (Schmidt et al., 2018; Sutin et al., 2018). However, individuals not utilizing these five points have a weaker sense of cautiousness. Individuals with weaker cautiousness are often impulsive (Schmidt et al., 2018). Overall, a better understanding of the different facets will help individuals study conscientiousness in any area. One area in which conscientiousness can be explored is law enforcement.

Conscientiousness in Law Enforcement

Like empathy, there have been increased research studies on conscientiousness in law enforcement officers. The first wave of studies on personality in law enforcement compared the personality types of police officers and others in the population. Comparing the personality traits of police officers and the general population allowed researchers to determine if certain personality traits attracted individuals to a career in law enforcement (Khader & Goh, 2020). One study found a significant difference between agreeableness, emotional stability, and conscientiousness levels, in which law enforcement officers scored higher than the general population (Fryer, 2019). However, according to Fryer (2019), the study also found no significant difference in extraversion between the two subject groups. Overall, individuals who join emergency services professions have unique personality traits (Mason et al., 2020). To expand on this idea, one study compared the personality traits between police officers and firefighters. The study results found that law enforcement officers scored higher in self-discipline and dutifulness, two facets of conscientiousness (Salters-Pedneault et al., 2019).

The last wave of studies on personality in law enforcement studied whether there were any personality differences between successful and unsuccessful law enforcement officers. One study utilizing the Big Five personality traits found that successful law enforcement officers had higher levels of empathy, conscientiousness, and openness (Okhrimenko et al., 2022). Overall, having a good sense of ethics and strong morals is a good predictor of a successful law enforcement officer (Hassan et al., 2019). One way to ensure that law enforcement officers engage in personality traits that are contingent on being a successful police officer is that law enforcement organizations can promote these personality traits. One personality trait that law enforcement organizations should promote is conscientiousness.

Promoting Conscientiousness in Law Enforcement

To successfully promote conscientiousness, law enforcement organizations need to know the two distinct parts of the personality trait. The two different parts of conscientiousness are industriousness and orderliness. Industriousness stems from an individual's desire to achieve through planning and setting goals (Roberts et al., 2018; Wilmot & Ones, 2019). Orderliness focuses more on a sense of duty to your team and organization and less on ambition (Wilmot & Ones, 2019). Law enforcement organizations can start promoting conscientiousness after gaining knowledge of the different distinct parts.

Law enforcement organizations can utilize three types of interventions to promote conscientiousness. The first intervention is cognitive and behavioral therapy (CBT). Through CBT, individuals can see improvements in perseverance, work dedication, and discipline, which are aspects of high-conscientiousness individuals (Beitelspacher & Getchell, 2023). The second intervention is to utilize goal-related metacognitive techniques. As stated before, conscientious individuals are goal-orientated. Therefore, through metacognitive techniques, individuals can

better set goals, create a path to achieve the goal, and correctly address potential obstacles (Beitelspacher & Getchell, 2023). The last intervention is cognitive remediation therapy (CRT). Through CRT, individuals will experience increased cognitive functions, such as attention, working memory, and social cognition (Guillaume et al., 2021). As a result of the link between mental functions and conscientiousness, CRT increases conscientiousness in individuals (Guillaume et al., 2021). By promoting the three interventions of conscientiousness, law enforcement organizations will experience multiple benefits. One aspect where conscientiousness in law enforcement could be beneficial is during the hiring process.

Hiring

The hiring process is a crucial aspect of law enforcement organizations, as it determines the future performance and satisfaction of their employees. A previous study found that incumbent law enforcement officers score lower on desired and higher on undesired personality traits (Challacombe et al., 2019). This underscores the importance of ensuring new hires have the desired personality traits. To expand on desired and undesired personality traits, one study by Detrick and Chibnall (2017) researched which Big Five personality traits could be beneficial during the hiring process to help identify potential high-performing police officers. This study found no significant difference between agreeableness, openness, extraversion, and the performance level of potential police officers (Detrick & Chibnall, 2017). However, the study's results found that entry-level police officers who were high in conscientiousness were also high-performing individuals (Detrick & Chibnall, 2017). Another study found that focusing on emotional stability, excitability, conscientiousness, and agreeableness during the hiring process is a good predictor of job performance (Winterberg et al., 2022). This highlights the engagement

and attention that should be given to the hiring process, as it can significantly impact the organization's future.

Job Retention Within Law Enforcement

Low job retention has become an issue within law enforcement. One study found that low job retention in law enforcement results from stress, low job satisfaction, and an elevated level of danger (Lichtenstein, 2018). Therefore, it is crucial for law enforcement organizations to conduct research on the different aspects that could improve job retention. Through a longitudinal study, Liu et al. (2017) found that law enforcement officers with higher conscientiousness levels experienced longer job retention (Liu et al., 2017). This underscores the pivotal role of conscientiousness in job retention, which could reassure law enforcement organizations about the potential for increased retention rates.

Individuals are more likely to stay in their chosen career when satisfied with their job. However, job satisfaction is also affected by personality. When an individual's personality is well-suited to their current job, the individual is more likely to have higher levels of job satisfaction (Aydogmus et al., 2018). According to Aydogmus et al. (2018), conscientiousness is a strong predictor of high levels of job performance across all job levels. Another study, utilizing a meta-analytic investigation, also found a correlation between conscientiousness and job satisfaction (Steel et al., 2019). This correlation suggests a potential for increased job satisfaction through conscientiousness, which could make law enforcement organizations feel hopeful about the impact on job dedication.

Job Dedication

According to Donnellan and Mendoza (2019), individuals with conscientious personalities often dedicate themselves fully to all aspects of their lives. This can include

families, friends, and careers. A career in law enforcement is hard work and requires a vast amount of dedication (Liu et al., 2017). One study found a positive correlation between conscientiousness and job dedication (Sari, 2020). Another study found conscientiousness to be the best personality trait to predict job dedication (Janssens et al., 2019). Like empathy, conscientiousness is beneficial to multiple aspects of law enforcement. Therefore, similar to empathy, it is beneficial and essential for researchers to measure conscientiousness within law enforcement, underlining the significance of their work.

Scales to Measure Conscientiousness

In the study mentioned above by Liu et al. (2017), the researchers measured conscientiousness through the UFFM-I. The UFFM-I was developed by Carter and LoPilato (2014) to calculate an individual's trait conscientiousness. Furthermore, unlike other measures of conscientiousness, the UFFM-I was developed to look at all facets of conscientiousness (Carter et al., 2014; Roberts et al., 2018). Therefore, the researcher will also measure conscientiousness through the UFFM-I in this study.

Aspects That Affect Personality

Multiple factors influence the personality of law enforcement officers. One study utilized multiple regression to research the different factors. The study's results found that situations, organization, and community affect the personality traits of law enforcement officers (Schuerger et al., 2017). Sex, race, age of the offender(s) and victim(s), and location of where the crime was committed are examples of situational factors that could influence the personality traits of law enforcement officers. Schuerger et al. (2017) states that policies, department size, and supervisors are organizational factors that could influence the personality of law enforcement officers. Lastly, an area's crime rate and political orientation are community factors that could

influence the personality traits of law enforcement officers. Another study by Beutler et al. (2017) found that a law enforcement officer's personality is also affected by heredity, family background, culture, and individual characteristics. However, this research paper will focus on different personal characteristics that affect the personality of law enforcement officers.

Individual Characteristics

Individual characteristics are what make law enforcement officers unique. The foundation of an individual's personality also depends on these characteristics. According to previous research, there are four individual characteristics that make law enforcement officers unique (Beutler et al., 2017; Chen et al., 2017). Sex is the first individual characteristic that can affect the personality traits of law enforcement officers. According to the UCR, 83 percent of law enforcement officers are males, and 16 percent are female (Jones, 2022). One study conducted by Chen et al. (2017) researched the effect sex has on empathy. The study's results found that females have significantly higher levels of empathy than males. Age is the second individual characteristic that can affect the personality traits of law enforcement officers. According to the UCR, the mean age of law enforcement officers is 40 years old (Jones, 2022). Another study by Grünh et al. (2018) researched how empathy levels change due to age. The study's results found that individuals between 24 to 35 years and 36 to 45 years had higher levels of empathy than individuals between 46 to 55 years (Grünh et al., 2018). However, Grünh et al. (2018) also found no age-related decline in empathy levels in each group.

Researchers have also studied how personality can be affected by both sex and age. One study by Eisenberg and Lennon (2017) researched how empathy levels changed based on sex and age. The results of the study found that females between 18 and 30 had higher levels of empathy than females between 31 and 40 years (Eisenberg & Lennon, 2017). The study's results also

found that males in the same age ranges had lower levels of empathy (Eisenberg & Lennon, 2017). Another study by Shchebetenko et al. (2020) studied how conscientiousness levels are affected by sex and age. Previous studies on conscientiousness have found that younger females have higher levels of conscientiousness than older females and males of any age group (Shchebetenko et al., 2020). Similar to previous studies, Shchebetenko et al. (2020) found that females between 18 and 45 years were more conscientious than females between 46 and 79 years old. Males, regardless of age, were lower in conscientiousness when compared to females (Shchebetenko et al., 2020). While multiple studies have been conducted to research the effects sex, age, and both characteristics have on personality, this research paper will focus more on the two other individual characteristics. The first individual characteristic this research paper will focus on is the different education levels of law enforcement officers.

Education

Before becoming a law enforcement officer, an individual must meet multiple stipulations. Some stipulations include be 18 years old, have a high school diploma or GED, be a United States citizen, have a valid driver's license, and be able to pass a background check (Marshall, 2022). After these five stipulations have been met, an individual can start completing the other requirements to become a law enforcement officer. According to Marshall (2020), the current requirements under the Virginia Department of Criminal Justice Services to become a law enforcement officer, after the stipulations have been met, is to graduate from the law enforcement academy, pass the certification exam, and complete field training. While the requirements to become a law enforcement officer are similar for every state, other countries also have additional requirements. Another requirement other countries have to become a law enforcement officer is some form of higher education.

One study by Paterson (2017) researched the requirements of different countries to become law enforcement officers. The study results found that the United States had fewer and less restrictive requirements than any other country (Paterson, 2017). Two countries that had the most and more stringent requirements were Norway and Finland. Norway and Finland require a bachelor's degree before becoming a law enforcement officer (Paterson, 2017). Another study conducted by Bruns and Magnan (2018) researched the opinions of law enforcement officers on higher education. The results of the study found that most law enforcement officers viewed higher education as significant (Bruns & Magnan, 2018). However, Bruns and Magnan (2018) could not determine the specific level of education a law enforcement officer should obtain or what degrees would be most beneficial.

Beneficial Degrees

Before starting college, an individual has to make one crucial decision, deciding what program to study. Choosing a degree that best fits the intended career goals is essential when pursuing a law enforcement career. Some examples of programs include accounting, biology, psychology, engineering, and forensic science. While a degree in engineering would be beneficial if an individual were pursuing a career in construction, this degree would be unbeneficial for an individual in law enforcement. Previous research has outlined the most popular degrees of law enforcement officers. The first degree outlined by previous research is a degree in criminal justice.

Criminal Justice

Criminal justice is an interdisciplinary study focusing on law, psychology, sociology, and public administration (Brereton, 2018). One study was conducted to research the benefits of law enforcement officers having an associate in criminal justice. Carter and Sapp (2018) found that

an associate in criminal justice helps law enforcement officers make rational decisions and employ informed solutions to issues encountered daily in law enforcement. Previous research has also found that an associate in criminal justice provides law enforcement officers with a greater understanding of criminal and constitutional law (Carter & Sapp, 2018; Polk & Armstrong, 2019).

The second program and degree outlined by previous research is a Bachelor of Science in criminal justice administration. Polk and Armstrong (2019) found that a bachelor's degree in criminal justice administration provides an individual with a more in-depth knowledge of the knowledge, theoretical framework, and practices of criminal justice administration. The last program and degree outlined by previous research is a Bachelor of Science in Homeland Security. Unlike a bachelor's degree in criminal justice administration, this degree provides individuals with more knowledge of counterterrorism, immigration, border management, critical infrastructures, cyber networks, and disaster resilience (Brereton, 2018; Travis, 2018). Another degree that could be beneficial to a career in law enforcement is psychology.

Psychology

Psychology focuses on studying human and social behaviors. Psychology also focuses on the root causes of crime. There are multiple concentrations that an individual can choose to focus on when receiving a degree in psychology. One concentration that would benefit a law enforcement career is forensic psychology. Forensic psychology studies the relationship between psychology and criminal justice (Travis, 2018). One study found that an undergraduate degree in forensic psychology allows patrol officers to understand and perceive more when interacting with suspects. Another study found that law enforcement officers with a degree in forensic

psychology need less training and overseeing after being hired (Travis, 2018). Another concentration that would benefit a law enforcement career is criminal psychology.

Criminal psychology studies offenders' thoughts, feelings, events, and behaviors (Brereton, 2018). Law enforcement officers with a criminal psychology degree can provide multiple benefits. One study found that law enforcement officers with a degree in criminal psychology can provide other officers with a psychological assessment of suspects (Brereton, 2018). Another study found that law enforcement officers with a degree in criminal psychology are more successful when interrogating suspects (Travis, 2018). This is the result of the different interrogation strategies that are learned when receiving this degree. Computer science is the last degree that could benefit a law enforcement career.

Computer Science

Today, technology is utilized in almost every aspect of law enforcement. Therefore, a degree in computer science is becoming increasingly important in law enforcement. Computer science studies developing and testing software and software systems (Carter & Sapp, 2018). One study found that individuals with a degree in computer science are better able to investigate crimes (Polk & Armstrong, 2019). Mainly, a computer science degree helps law enforcement officers to investigate cybercrimes. Another study found that a degree in computer science helps law enforcement officers better protect the internal computer systems of their law enforcement agency from system malfunctions and hackers (Carter & Sapp, 2018).

While higher education is not required, some law enforcement officers have a college degree. According to the UCR, 26 percent of law enforcement officers have an associate degree, 49 percent have a bachelor's, and six percent have a master's degree (Jones, 2022). To further expand on the research into education and law enforcement, researchers have conducted multiple

studies to study the benefits higher education has on law enforcement. Research into the topic has noted four benefits of law enforcement officers having a higher level of education.

Benefits of Higher Education

As stated before, within the United States, individuals are not required to have a higher degree to become a law enforcement officer. However, there are some potential benefits to having a higher level of education within law enforcement. The first benefit of having a higher level of education is promotion opportunities. In 2021, the average salary of law enforcement officers was a little under 61,200 (Baro & Burlingame, 2022). However, according to Baro and Burlingame (2022), the average salary of police chiefs in 2021 was a little under 77,590. However, previous research has found that law enforcement officers are more likely to be promoted if they have a college degree. For example, Polk and Armstrong (2019) found that 67 percent of police chiefs hold a bachelor's degree and 43 percent hold an associate degree. Therefore, one of the keys to reaching higher levels of law enforcement is to have a higher level of education.

The second benefit to having a higher education level is the opportunity to expand careers in different directions. Law enforcement expands beyond the typical police department. For example, other jobs in law enforcement include cybersecurity, public administration, arson investigation, and homeland security. A higher degree in law enforcement will make transitioning into different careers easier for law enforcement officers (Heinrich, 2018). The third benefit of having a higher level of education is improvement in perspective. A broader perspective allows law enforcement officers to develop confidence and leadership abilities (Carter & Sapp, 2018). The last benefit of higher education is the degree's positive impact on law enforcement officers' personalities, which will be the main focus of this research study.

Impact of Education on Personality

Education has a vital role in today's society. Education occurs when an individual acquires new skills, understanding, and/or behaviors (Leigh, 2019). An individual's personality is created by that person's characteristics, psychological traits, attitudes, motives, and beliefs (Dahmann & Anger, 2018; Leigh, 2019). Therefore, being educated means improving personality (Dahmann & Anger, 2018). Education provides individuals with helpful information, which could be useful for law enforcement officers. As stated before, a career in law enforcement is dangerous and stressful. However, having an education could help law enforcement officers in decision-making. According to Leigh (2019), the best decisions are backed by knowledge. Therefore, if a law enforcement officer is educated, he or she can make better decisions.

Education can also help law enforcement officers during challenging situations. It teaches individuals how to handle and resolve situations (Dahmann & Anger, 2018; Leigh, 2019). Overall, education is a way to build a foundation for positive personality development. To expand on this topic, researchers have conducted multiple studies to determine whether there is a correlation between higher education and the personality traits of law enforcement officers. Notably, researchers have conducted research to study the effect education has on empathy in law enforcement officers.

One study was conducted to research the relationship between education and empathy. The results of the study found that there is a positive correlation between education and empathy. An education allows an individual to understand other individuals' perspectives better and develop compassion for others (Sutherland, 2019). Another study was conducted to determine if education increases levels of empathy. The study's results found that law enforcement officers

with a higher level of education also had higher levels of empathy (Feshbach, 2019). Lastly, a study conducted by Smith and Aamodt (2017) researched the effects higher education has on levels of empathy among law enforcement officers. The study's results found a significant correlation between higher levels of education and empathy (Smith & Aamodt, 2017). However, the study's results also found that levels of empathy decreased after five years in law enforcement when the officer only had a high school diploma (Smith & Aamodt, 2017).

The researcher has also conducted studies to research the effect education has on levels of conscientiousness. One study conducted by Rydberg and Terrill (2017) examined how levels of education affect levels of conscientiousness in law enforcement officers. The study's results found that higher levels of education increased conscientiousness in law enforcement officers (Rydberg & Terrill, 2017). Another study was conducted to study the relationship between education and personality development of law enforcement officers. The study's results found that education is correlated with changes in personality traits (Jackson, 2018). Jackson (2018) also found that education increased the levels of conscientiousness and decreased the levels of neuroticism in law enforcement officers. Overall, previous research has concluded a reciprocal relationship between education and changes in personality traits (Dahmann & Anger, 2018; Jackson, 2018; Varela et al., 2019).

Time in Service

The last individual characteristic this research paper will focus on is time in service. As stated before, law enforcement is a stressful and dangerous career. Continued exposure to these conditions could either positively or negatively impact different aspects of a law enforcement officer. One aspect of a law enforcement officer that could be positively or negatively affected by time in service is social attitudes. One study was conducted to research how time in service

affects law enforcement officers personally. Data for the study was gathered using a comprehensive and reliable survey. Adlam (2018) divided the subjects into four categories: (1) was not affected, (2) was affected and on-duty personality differs from off-duty personality, (3) was affected and new elements of personality have interwoven into a core personality, and (4) was affected and developed a new personality that has extended into off-duty life. Results of the study found that 11 percent of law enforcement officers are in Category One, 22 percent fall into Category Two, 61 percent fall into Category Three, and six percent fall into Category Four (Adlam, 2018). Personality is another aspect of a law enforcement officer that could be positively or negatively affected by time in service.

As shown in the study above, time in service can affect a law enforcement officer's personality. However, one study was conducted to research which personality traits are most affected by time in service. Notably, the study researched how both positive and negative personality traits are affected by time in service. Using a longitudinal study, Kirkcaldy et al. (2018) studied the personality changes in law enforcement officers after just entering and being in the service for two years. The personality traits the researchers studied were confidence, assertiveness, empathy, and conscientiousness. The study's results found that law enforcement officers had significantly higher self-confidence and assertiveness after just entering the service (Kirkcaldy et al., 2018). The study also found that levels of empathy and conscientiousness were substantially higher after two years in the service (Kirkcaldy et al., 2018).

Another study by Waldman (2017) researched how time in service affects empathy levels in law enforcement officers. The study found that empathy levels were higher in law enforcement officers who had more than 15 years in law enforcement, which correlates with the results of the previous research (Waldman, 2017). Another study conducted by Challacombe et

al. (2019) researched how stress and time in service affect conscientiousness levels in law enforcement officers. The study found that levels of conscientiousness increased in law enforcement officers after ten years in law enforcement (Challacombe et al., 2019).

Summary

Chapter Two was comprised of a literature review that focused on a variety of topics. The literature review provided research into different personality traits and identified the ideal personality traits of law enforcement officers. Previous research has shown that two ideal personality traits of law enforcement officers are empathy and conscientiousness. The literature review also provided research into different aspects that could affect empathy and conscientiousness in law enforcement officers. Other elements that could affect personality include situations, organization, and community. However, the literature review focused more on individual characteristics that can affect personality. The different individual characteristics the literature review discussed were sex, age, level of education, and time in service. However, as stated before in the problem statement, limited literature exists on how two or more individual factors affect the personality of law enforcement officers. While some of the concepts discussed embody separate topics in research, the topics collaborate to synthesize the study. Therefore, from previous studies, the researcher decided to study how combined individual factors influence the personality traits of law enforcement officers. In particular, the current study researched how education and time in service affect levels of empathy and conscientiousness in law enforcement officers.

CHAPTER THREE: METHODS

Overview

The aforementioned research mentioned above has shown that two valuable personality traits of law enforcement officers are empathy and conscientiousness. However, how levels of empathy and conscientiousness can be affected by the level of education and time in service in law enforcement officers still needs to be studied (Wachi et al., 2017). Therefore, Chapter Three outlines the methodology for the current study. Chapter Three is divided into seven sections. The seven sections are design, research question(s), hypothesis(es), participants and setting, instrumentation, procedures, and data analysis.

Design

The study aimed to research the effects of education and time in service on levels of empathy and conscientiousness in law enforcement officers. Therefore, the researcher designed a quasi-experimental quantitative research design. The purpose of quasi-experimental quantitative research is to determine if there is a cause-and-effect relationship between variables (Baker, 2019). The rationale behind choosing this design is that the researcher wanted to study the effect education and time in service have on levels of empathy and conscientiousness. Furthermore, a quasi-experimental quantitative research design was more suitable since the participants were not randomly assigned to groups and were instead assigned based on educational level and time in service duration.

Quantitative research involves gathering and analyzing numerical data through statistical, mathematical, or computational means (Sukamolson, 2017). Under quasi-experimental quantitative research designs, researchers can collect data for studies through surveys, polls, questionnaires, and other methods that depict the results in numerical form. Therefore, since the researcher gathered data for the study using questionnaires and personality tests, the researcher utilized this quantitative research design.

The researcher also chose to do an overall quantitative research study based on the multiple benefits of the research designs. The first benefit of quantitative research is that the study will have a larger sample size (Bloomfield & Fisher, 2019). A larger sample size allows the researcher to generalize the study's results to other law enforcement officers of police departments within Virginia. The second benefit of quantitative research is that researchers can collect data quicker than other methods. The third benefit of quantitative research is that other researchers can duplicate the study's results in future research. In other words, quantitative research is highly reliable. According to Bloomfield and Fisher (2019), the fourth benefit of quantitative research is that the study data can be confidential or anonymous. Overall, quantitative research is a good approach when trying to find a significance between two or more items (Sukamolson, 2017). Sukamolson (2017) also recommended quantitative research when a researcher wants to improve knowledge on a particular topic of study.

The research study was also exploratory. Researchers utilize exploratory research to research a topic that past research needs to clearly or accurately define (Armstrong, 2017). There are two types of exploratory research methods: primary and secondary research. A study is considered primary research when the data is gathered directly from the participants. Data for primary research is gathered utilizing questionnaires, surveys, observation, and/or focus groups. A study is considered secondary research when the data is collected from previously published primary research (Armstrong, 2017). Data for secondary research is gathered utilizing case study research and previous literature. However, for this study, a primary exploratory research design was used since the data for the study was collected directly from the participants using questionnaires.

Comparable to quantitative research, exploratory research also has several advantages. One advantage of exploratory research is its flexibility, making it easier for researchers to adapt to alterations during the research process (Mainardes et al., 2017). The second advantage of exploratory research is that a foundation is laid for future researchers to expand on the topic. The last advantage of exploratory research is that this method can aid other researchers in studying other various reasons for the problem (Mainardes et al., 2017). Overall, through exploratory research, researchers can study a specific issue without obtaining a conclusion (Armstrong, 2017).

Research Questions

The researcher addressed the following research questions in the study:

RQ1: *Does the level of education affect the levels of empathy within law enforcement officers?*

RQ2: *Does the level of education affect the levels of conscientiousness within law enforcement officers?*

RQ3: *Does time in service affect the level of empathy within law enforcement officers?*

RQ4: *Does time in service affect the level of conscientiousness among law enforcement officers?*

RQ5: *Does the level of education and time in service have a combined effect on the levels of empathy within law enforcement officers?*

RQ6: *Does the level of education and time in service have a combined effect on the levels of conscientiousness within law enforcement officers?*

Hypotheses

The null hypotheses for this study are:

RQ1: *Does the level of education affect the levels of empathy within law enforcement officers?*

- H₀₁: There is no significant difference between education level and levels of empathy in law enforcement officers.
- H_{a1}: There is a significant difference between education level and levels of empathy in law enforcement officers.

RQ2: *Does the level of education affect the levels of conscientiousness within law enforcement officers?*

- H₀₂: There is no significant difference between education level and levels of conscientiousness in law enforcement officers.
- H_{a2}: There is a significant difference between education level and levels of conscientiousness in law enforcement officers.

RQ3: *Does time in service affect the levels of empathy among law enforcement officers?*

- H₀₃: There is no significant difference between time in service and levels of empathy in law enforcement officers.
- H_{a3}: There is a significant difference between time in service and levels of empathy in law enforcement officers.

RQ4: *Does time in service affect the levels of conscientiousness within law enforcement officers?*

- H₀₄: There is no significant difference between time in service and levels of conscientiousness within law enforcement officers.
- H_{a4}: There is a significant difference between time in service and levels of conscientiousness within law enforcement officers.

RQ5: *Does the level of education and time in service have a combined effect on levels of empathy within law enforcement officers?*

- H₀₅: There is no significant difference between both education level and time in service and levels of empathy in law enforcement officers.
- H_{a5}: There is a significant difference between both education level and time in service and levels of empathy in law enforcement officers.

RQ6: *Does the level of education and time in service have a combined effect on levels of conscientiousness within law enforcement officers?*

- H₀₆: There is no significant difference between both education level and time in service and levels of conscientiousness in law enforcement officers.
- H_{a6}: There is a significant difference between both education level and time in service and levels of conscientiousness in law enforcement officers.

Participants and Setting

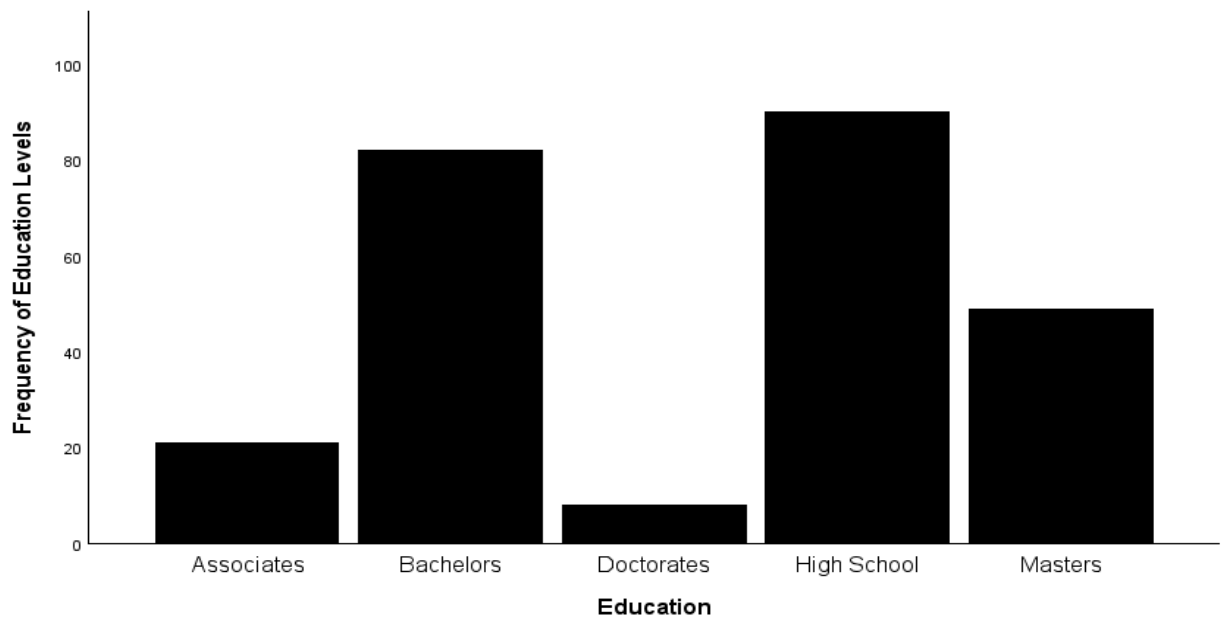
The participants for the study were drawn from law enforcement agencies throughout Virginia. The sampling design was a non-probability, purposive method. The only limiting factor was the state in which the law enforcement officers served, which was Virginia. The researcher considered this limiting factor during recruitment. The law enforcement officers began with the initial participation question after the informed consent to determine the final sample size. The researcher included the law enforcement officers who answered “I agree” within the sample. The final sample size for the study was 250 participants, which is congruent with both Challacombe et al. (2019) and Dahmann and Anger (2018) studies. The sample size also met the proposed sample size reported in the IRB application.

The participants for the study were random, unknown law enforcement officers. The law enforcement officers were employees of police departments located throughout Virginia. The participants were mainly employed at one of the 15 police departments chosen for the study. The current 15 police departments the researcher chose were the Altavista Police Department, Arlington County Police Department, Chesapeake Police Department, Chesterfield County Police Department, Colonial Beach Police Department, Culpeper Police Department, Fredericksburg Police Department, Halifax Police Department, Lexington Police Department, Lynchburg Police Department, Newport News Police Department, Norfolk Police Department, Orange Police Department, Quantico Police Department, and Salem Police Department. To ensure that the participants remained unknown, the only personal information the researcher collected was sex, age, education level, and time in service.

The sample consisted of law enforcement officers employed in Virginia (216 males, 34 females, $M_{\text{age}} = 1.14$, $SD = 0.343$). As stated before, the study had a total of 250 participants. Twenty-nine participants were between the ages 18 and 24 years old, 76 were between 25 and 34 years old, 66 participants were over 35 and 44 years old, 45 participants were between 45 and 54 years old, 28 participants were between 55 and 64 years old, and 6 participants were 65 years or older ($M = 2.94$, $SD = 1.271$). Ninety participants had a high school diploma or a GED, 21 had an associate's degree, 82 had a bachelor's degree, 49 had a master's degree, and 8 had a doctorate ($M = 2.46$, $SD = 1.248$). Results of the descriptive statistics of the participants' education levels are depicted in Figure 1.

Figure 1

Education Levels for Participants

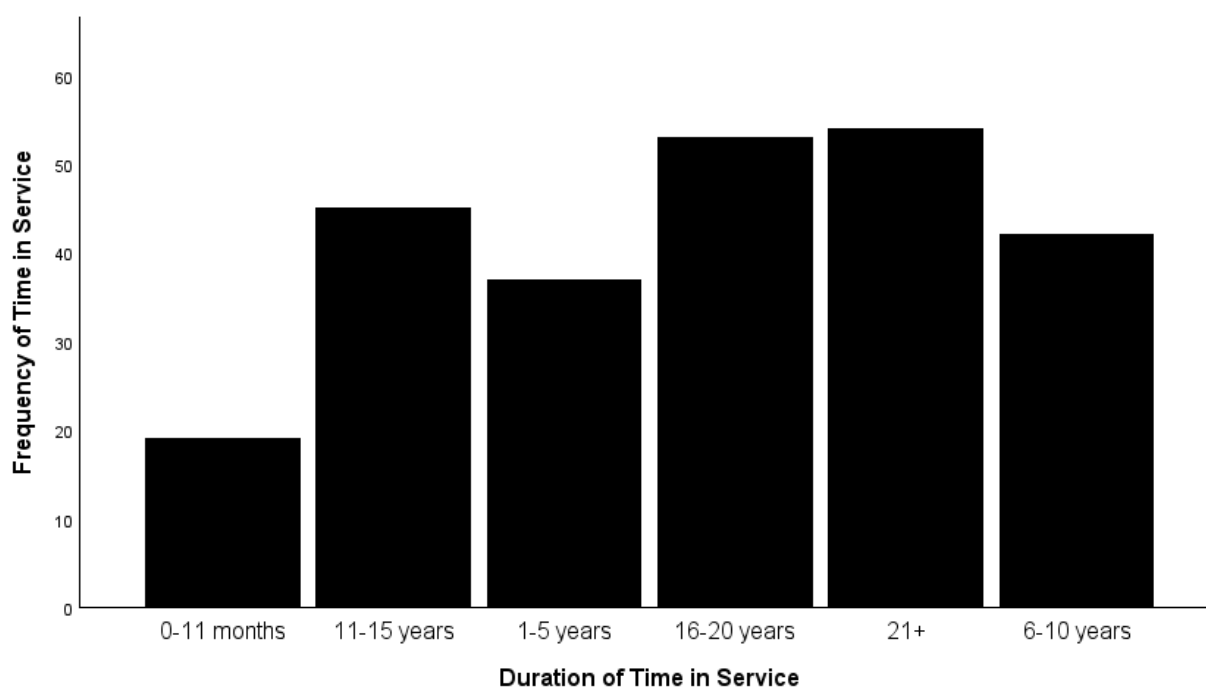


Note. Bar graph depicting the frequency of education levels for participants.

Lastly, 19 participants had zero to 11 months of experience, 37 had one to five years, 42 had six to 10 years, 45 had 11 to 15 years, 53 had 16 to 20 years of experience, and 54 participants had 21 plus years of experience ($M = 3.96$, $SD = 1.591$). Results of the descriptive statistics of the duration of time in service of the participants are depicted in Figure 2.

Figure 2

Duration of Time in Service for Participants



Note. Bar graph depicting the frequencies for the duration of service for participants.

Instrumentation

Within the study, the researchers utilized three instruments. The first instrument the researcher utilized was a demographic questionnaire (see Appendix A). The demographic questionnaire gathered information on the participants' sex, age, education level, and duration of time in service. The second instrument utilized was the IRI. The IRI is a 28-question standardized test using a five-point Likert Scale to measure the four concepts of empathy (see Appendix B). The four concepts measured by the IRI are perspective-taking ability, empathic concern for another individual's feelings, level of personal distress for another individual's pain, and the ability to submerge oneself in a fantasy (Chrysikou & Thompson, 2017). The five-point Likert scale ranged from Does not describe me well to Describes me well. Responses were as follows: Describes me well = 5, Describes me a little = 4, Neutral = 3, Somewhat describe me = 2, and Does not describe me well = 1. The combined possible score on the IRI ranges from 28 to

140 points. A score of 28 points is the lowest possible score, meaning that the participant is low in empathy. A score of 140 points is the highest, meaning the participant is highly empathetic. Multiple studies have been conducted to research the reliability and validity of the IRI. The results of the studies found that the IRI had good test-retest reliability (Chrysikou & Thompson, 2017; Péloquin & Lafontaine, 2017). One study found that the test-retest reliability of the IRI ranged from .62 to .80 for males and .61 to .79 for females after 70 to 75 days (Carey et al., 2018). Concerning the validity of the IRI, multiple studies have found that females score higher in empathy than males (Carey et al., 2018; Briganti et al., 2018). The IRI has been utilized in multiple studies (Briganti et al., 2018; Carey et al., 2018; Chrysikou & Thompson, 2017; Péloquin & Lafontaine, 2017).

The last instrument utilized by the researcher was the UFFM-I. The UFFM-I is a 20-item personality instrument that measures the six facets of conscientiousness (see Appendix C). The six facets use a five-point Likert scale that ranges from Strongly Agree to Strongly Disagree. Responses were as follows: Strongly Agree = 5, Agree = 4, Neutral = 3, Disagree = 2, and Strongly Disagree = 1. The combined possible score on the UFFM-I ranges from 20 to 100 points. A score of 20 points is the lowest possible score, meaning that the individual is low in conscientiousness. However, a score of 100 points is the highest, meaning that the individual is highly conscientious. Multiple studies have tested the reliability and validity of the UFFM-I. The results of the studies found that the UFFM-I has good internal consistency and test-retest reliabilities (Carter et al., 2014; Detrick & Chibnall, 2017). One study found that the test-retest reliability of the UFFM-I ranged from .79 to .85 for males and .86 to .95 for females fifty days after the completion of the study (Uliaszek et al., 2019). Concerning the validity of the UFFM-I, multiple studies have found that females score higher in conscientiousness than males (Kumar &

Darolia, 2018; Uliaszek et al., 2019). The UFFM-I has been utilized in multiple studies (Detrick & Chibnall, 2017; Kumar & Darolia, 2018; Uliaszek et al., 2019). The last instrument utilized by the researcher was SPSS. The researcher utilized SPSS to organize, analyze, and conduct statistical tests on the data gathered for the study.

Procedures

For study recruitment, the researcher contacted the 15 police departments and provided a summary of the study that the researcher was conducting. The researcher also asked the police departments if they would participate in the study. After receiving confirmation, the researcher emailed the Chief of Police or top employee at the police department. Included in the email was a short overview of the study, a PDF copy of the consent form, and a copy of the hyperlink to the three-part survey. Within the overview and consent form, the researcher informed the participants that participation in the study was voluntary and that the information given would be anonymous. Since the researcher did not use deception, briefing and debriefing were unnecessary.

The first part of the survey gathered information on the law enforcement officer's age, sex, education level, and time in service. The second part of the survey contained the IRI, which measured levels of empathy. The last part of the survey contained the UFFM-I, which measured levels of conscientiousness. After the participants completed the study, the results were sent back to the researcher. However, the researcher did not gather any data before approval from the IRB, which was granted by submitting the IRB application. Included in the application was a summary of the study, recruitment materials, consent materials, and the instruments utilized to gather the data for the study. Approval for the study was granted on November 13, 2023.

Data Analysis

The researcher utilized SPSS and Microsoft Office to create tables, graphs, and charts. The research questions for the study were the following: Does the level of education affect the levels of empathy within law enforcement officers, Does the level of education affect levels of conscientiousness within law enforcement officers, Does time in service affect levels of empathy within law enforcement officers, Does time in service affect levels of conscientiousness within law enforcement officers, Does the level of education and time in service have a combined effect on levels of empathy in law enforcement officers, and Does the level of education and time in service have a combined effect on levels of conscientiousness in law enforcement officers? For the six researcher questions, there was one overall working hypothesis. The overall working hypothesis for the study was that highly educated, experienced officers would be highly empathetic and conscientious. The null hypothesis was that there is no significant difference between education level and time in service and levels of empathy and conscientiousness. The researcher utilized SPSS to condense the data collected into tables and graphs. The researcher also utilized SPSS to analyze the data collected from the survey. The researcher used SPSS to analyze the dependent variables, empathy and conscientiousness. The researcher noted a participant's individual IRI and UFFM-I scores in SPSS under their assigned number. The researcher conducted multiple statistical tests to analyze the effects education level and time in service had on the two dependent variables. Through SPSS, the researcher conducted one-way ANOVAs.

A one-way ANOVA is utilized to evaluate the mean differences between three or more groups (Obilor & Amadi, 2018). As stated before, five levels of education were being researched in the study. The five levels are high school diploma/GED, associate degree, bachelor's degree,

master's degree, and doctorate. The researcher tested the five levels of the independent variable twice. The first ANOVA tested the mean difference between the levels of education and the levels of empathy among law enforcement officers. The second ANOVA tested the mean difference between the levels of education and the levels of conscientiousness in law enforcement officers. Also, as stated before, there were five durations of time in service being researched in the study. The five durations were one to five years, six to 10 years, 11 to 15 years, 16 to 20 years, and 21 plus years. The third ANOVA tested the mean difference between the levels of duration and the levels of empathy among the law enforcement officers. The last ANOVA tested the mean difference between the duration levels and levels of conscientiousness among law enforcement officers. The researcher also conducted Fishers LSD post hocs. Post hocs tests are additional tests done after an ANOVA to determine which mean differences were significant (Obilor & Amadi, 2018). The researcher utilized a significance level of .05. The researcher also utilized SPSS to conduct a two two-way ANOVA.

A two-way ANOVA tests the effects of two independent variables on a dependent variable (Bangdiwala, 2018). As stated before, the independent variables were level of education and time in service. The dependent variables were levels of empathy and conscientiousness among law enforcement officers. Therefore, the researcher conducted two two-way between-subjects ANOVAs. Between subjects is when different groups of subjects are utilized for each level of the variable (Bangdiwala, 2018). The first two-way ANOVA tested the effects of the different levels of education and the different durations of time in service on levels of empathy among law enforcement officers. For example, the two-way ANOVA will test the combined effects of a high school diploma/GED and six to ten years of service on empathy among law enforcement officers. The last two-way ANOVA tested the effects of the different levels of

education and the different durations of time in service on levels of conscientiousness among law enforcement officers. This two-way ANOVA will test the combined effects of a master's degree on 21-plus years of service on conscientiousness among law enforcement officers. The researcher will also be conducting post hoc tests to determine significance. Like before, Fishers LSD post hocs will also be conducted utilizing a .05 significance level.

CHAPTER FOUR: FINDINGS

Overview

Chapter Four of the research study is divided into three sections. The first section provides another overview of the research questions and hypotheses for the study. The second section provides the descriptive statistics for the study. The descriptive statistics included the variables' mean, median, mode, frequency, and standard deviation. The last section reports the study's results. The chapter ends with the researcher stating whether the null hypotheses failed or were supported. Listed below are the research questions and hypotheses for the study.

RQ1: *Does the level of education affect the levels of empathy within law enforcement officers?*

- H₀₁: There is no significant difference between education level and levels of empathy in law enforcement officers.
- H_{a1}: There is a significant difference between education level and levels of empathy in law enforcement officers.

RQ2: *Does the level of education affect the levels of conscientiousness within law enforcement officers?*

- H₀₂: There is no significant difference between education level and levels of conscientiousness in law enforcement officers.

- H_{a2}: There is a significant difference between education level and levels of conscientiousness in law enforcement officers.

RQ3: *Does time in service affect the levels of empathy among law enforcement officers?*

- H₀₃: There is no significant difference between time in service and levels of empathy in law enforcement officers.
- H_{a3}: There is a significant difference between time in service and levels of empathy in law enforcement officers.

RQ4: *Does time in service affect the levels of conscientiousness within law enforcement officers?*

- H₀₄: There is no significant difference between time in service and levels of conscientiousness within law enforcement officers.
- H_{a4}: There is a significant difference between time in service and levels of conscientiousness within law enforcement officers.

RQ5: *Does the level of education and time in service have a combined effect on levels of empathy within law enforcement officers?*

- H₀₅: There is no significant difference between both education level and time in service and levels of empathy in law enforcement officers.
- H_{a5}: There is a significant difference between both education level and time in service and levels of empathy in law enforcement officers.

RQ6: *Does the level of education and time in service have a combined effect on levels of conscientiousness within law enforcement officers?*

- H₀₆: There is no significant difference between both education level and time in service and levels of conscientiousness in law enforcement officers.

- H_{a6}: There is a significant difference between both education level and time in service and levels of conscientiousness in law enforcement officers.

Descriptive Statistics

A selective or subjective sample of law enforcement officers employed in Virginia (216 males, 34 females, $M_{age} = 2.94$, $SD = 1.27$) participated in the study. For education level, 36 percent had a high school diploma or a GED, 8.4 percent had an associate, 32.8 percent had a Bachelors, 19.6 percent had a Masters, and 3.2 percent had a Doctorate. The mean and standard deviations for each education level were: High school ($M = 88.70$, $SD = 17.77$), Associates ($M = 94.86$, $SD = 18.44$), Bachelors ($M = 95.70$, $SD = 18.29$), Masters ($M = 93.49$, $SD = 12.67$), and Ph.D. ($M = 104.25$, $SD = 14.64$). For the duration of time in service, 7.6 percent had 0-11 months experience, 14.8 percent had 1-5 years, 16.8 percent had 6-10 years, 18 percent had 11-15 years, 21.2 percent had 16-20 years, and 21.6 percent had 21 plus years experience. The mean and standard deviations for each time in service duration were: 0-11 months ($M = 102.00$, $SD = 27.75$), 1-5 years ($M = 100.41$, $SD = 22.33$), 6-10 years ($M = 91.10$, $SD = 18.19$), 11-15 years ($M = 91.84$, $SD = 11.58$), 16-20 years ($M = 88.76$, $SD = 13.61$), and 21 plus years ($M = 91.19$, $SD = 12.78$).

Results

For the study, the researcher measured empathy through the IRI questionnaire. The scale of possible answers for each question on the IRI questionnaire ranged from 1 (*Does not describe me well*) to 5 (*Describes me well*). Total scores on this questionnaire ranged from 28 (a score of 1 on all questions) to 140 (a score of 5 on all questions). The researcher utilized the UFFM-I questionnaire to measure conscientiousness. The scale of possible answers for each question on the UFFM-I questionnaire ranged from 1 (*Strongly disagree*) to 5 (*Strongly Agree*). Total scores

on this questionnaire ranged from 20 (a score of 1 on all questions) to 100 (a score of 5 on all questions). Each participant's individual empathy and conscientiousness score was recorded into SPSS. The highest recorded empathy score was 139, and the lowest was 51. The highest recorded conscientiousness score was 92, and the lowest was 37. It was through SPSS that the researcher ran multiple statistical tests.

Assumption Tests

As stated before, there are six research questions in the study. For the first four research questions, the researcher utilized one-way ANOVAs to see if there was a significance between the independent and dependent variables. As stated before, the independent variables were education (high school diploma/GED, associates, Bachelors, Masters, or Doctorate) and time in service (0-11, 1-5, 6-10, 11-15, 16-20, or 21 plus years). The dependent variables were empathy and conscientiousness scores. If the null hypothesis for a research question was rejected, the researcher conducted Fisher LSD post hoc tests to determine which mean differences were significant. The researcher utilized an alpha level of 0.05 to determine significance. To determine the effect size, the researcher used the statistical test eta-squared.

For the last two research questions, the researcher utilized two-way ANOVAs to see if there was a significance from the combined effects of the independent variables on the individual dependent variables. For example, one of the two-way ANOVAs was used to test if there was a significance between the combined effects of the different levels of education and the different durations of time in service on the levels of empathy. Like with the one-way ANOVAs, if the null hypothesis was rejected, Fisher LSD post hoc tests were also conducted utilizing an alpha level of 0.05. Furthermore, eta-squared was also used to determine effect size.

Hypothesis One

Listed below is the first research question and null hypothesis for the study:

RQ1: *Does the level of education affect the levels of empathy within law enforcement officers?*

- H_01 : There is no significant difference between education level and levels of empathy in law enforcement officers.

A one-way between-subjects ANOVA was conducted to compare the effect of education on empathy in high school diploma, bachelor's, associate's, master's, and doctorate conditions. There was a statistically significant effect of education on empathy at the $p < .05$ level for the five conditions [$F(4, 245) = 2.89, p = 0.023, \eta^2 = 0.045$]. The eta squared score of 0.045 indicated a small effect size. Since the null hypothesis was rejected, the researcher conducted post hoc tests to determine the significant mean differences. A Fisher's LSD post hoc test indicated that the mean score for the Bachelor's condition ($M = 95.70, SD = 18.29$) significantly differed from the high school diploma/GED condition ($M = 88.70, SD = 17.77$). The post hoc test also indicated that the mean score for the Ph.D. degree condition ($M = 104.25, SD = 14.64$) significantly differed from the high school diploma/GED condition ($M = 88.70, SD = 17.77$).

The post hoc test did not find a statistically significant difference between the other levels of education and levels of empathy in law enforcement officers.

Table 1

Fishers LSD Post Hoc Test for Research Question One

Dependent Variable: Empathy						
LSD						
(I)	(J)	Mean			95% Confidence Interval	
Education	Education	Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
High School	Associates	-6.157	4.131	.137	-14.29	1.98

Dependent Variable: Empathy
LSD

(I) Education	(J) Education	Mean Difference (I- J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Associates	Bachelors	-6.995*	2.603	.008	-12.12	-1.87
	Masters	-4.790	3.027	.115	-10.75	1.17
	PhD	-15.550*	6.289	.014	-27.94	-3.16
	High School	6.157	4.131	.137	-1.98	14.29
Bachelors	Bachelors	-.838	4.169	.841	-9.05	7.37
	Masters	1.367	4.446	.759	-7.39	10.13
	PhD	-9.393	7.083	.186	-23.34	4.56
	High School	6.995*	2.603	.008	1.87	12.12
Masters	Associates	.838	4.169	.841	-7.37	9.05
	Masters	2.205	3.078	.474	-3.86	8.27
	PhD	-8.555	6.314	.177	-20.99	3.88
	High School	4.790	3.027	.115	-1.17	10.75
PhD	Associates	-1.367	4.446	.759	-10.13	7.39
	Bachelors	-2.205	3.078	.474	-8.27	3.86
	PhD	-10.760	6.501	.099	-23.56	2.04
	High School	15.550*	6.289	.014	3.16	27.94
	Associates	9.393	7.083	.186	-4.56	23.34
	Bachelors	8.555	6.314	.177	-3.88	20.99
	Masters	10.760	6.501	.099	-2.04	23.56

Note. Significant difference found between bachelors and high school and Ph.D. and high school, p – values less than 0.05. No other significant differences were found.

Hypothesis Two

Listed below is the second research question and null hypothesis for the study:

RQ2: *Does the level of education affect the levels of conscientiousness within law enforcement officers?*

- H₀₂: There is no significant difference between education level and levels of conscientiousness in law enforcement officers.

A one-way between-subjects ANOVA was conducted to compare the effect of education on conscientiousness in high school diploma, bachelor's, associate's, master's, and Ph.D conditions. There was a statistically significant effect of education on conscientiousness at the $p < .05$ level for the five conditions [$F(4, 245) = 3.290, p = 0.012, \eta^2 = 0.051$]. The eta squared score of 0.051 indicated a small effect size. Since the null hypothesis was rejected, the researcher conducted post hoc tests to determine the significant mean differences. A Fisher's LSD post hoc test indicated that the mean score for the Bachelor's condition ($M = 95.70, SD = 18.29$) significantly differed from the high school diploma/GED condition ($M = 88.70, SD = 17.77$). The post hoc test did not find a statistically significant difference between the other levels of education and levels of conscientiousness in law enforcement officers.

Table 2

Fishers LSD Post Hoc Test for Research Question Two

Dependent Variable: Conscientiousness						
LSD						
(I) Education	(J) Education	Mean Difference (I- J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
High School	Associates	-1.756	7.454	.814	-16.44	12.93
	Bachelors	-15.300*	4.696	.001	-24.55	-6.05
	Masters	-8.953	5.461	.102	-19.71	1.80
	PhD	-21.672	11.348	.057	-44.02	.68
Associates	High School	1.756	7.454	.814	-12.93	16.44
	Bachelors	-13.545	7.523	.073	-28.36	1.27
	Masters	-7.197	8.022	.371	-23.00	8.60
	PhD	-19.917	12.779	.120	-45.09	5.25
Bachelors	High School	15.300*	4.696	.001	6.05	24.55
	Associates	13.545	7.523	.073	-1.27	28.36
	Masters	6.347	5.554	.254	-4.59	17.29
	PhD	-6.372	11.393	.576	-28.81	16.07

Dependent Variable: Conscientiousness						
LSD						
(I)	(J)	Mean			95% Confidence Interval	
Education	Education	Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
Masters	High School	8.953	5.461	.102	-1.80	19.71
	Associates	7.197	8.022	.371	-8.60	23.00
	Bachelors	-6.347	5.554	.254	-17.29	4.59
	PhD	-12.719	11.729	.279	-35.82	10.38
PhD	High School	21.672	11.348	.057	-.68	44.02
	Associates	19.917	12.779	.120	-5.25	45.09
	Bachelors	6.372	11.393	.576	-16.07	28.81
	Masters	12.719	11.729	.279	-10.38	35.82

Note. Significant difference found between bachelors and high school, $p < 0.05$. No other significant differences were found.

Hypothesis Three

Listed below is the third research question and null hypothesis for the study:

RQ3: *Does time in service affect the levels of empathy among law enforcement officers?*

- H_{03} : There is no significant difference between time in service and levels of empathy in law enforcement officers.

A one-way between-subjects ANOVA was conducted to compare the effect of time in service on empathy in 0-11 months, 1-5 years, 6-10 years, 11-15 years, 16-20 years, and 21-plus years conditions. There was a significant effect of time in service on empathy at the $p < .05$ level for the six conditions [$F(5, 244) = 3.454, p = 0.005, \eta^2 = 0.066$]. The eta squared score of 0.051 indicated a medium effect size. Since the null hypothesis was rejected, the researcher conducted post hoc tests to determine the significant mean differences. The Fishers LSD post hoc test showed eight significant mean differences. First, the post hoc test indicated that the mean score for the 6-10 year condition ($M = 91.10, SD = 18.19$) significantly differed from the 0-11 month

condition ($M = 102.00$, $SD = 27.75$). Second, the post hoc test indicated that the mean score for the 11-15 year condition ($M = 91.84$, $SD = 11.58$) significantly differed from the 0-11 month condition ($M = 102.00$, $SD = 27.75$). Third, the post hoc test indicated that the mean score for the 16-20 year condition ($M = 88.76$, $SD = 13.61$) significantly differed from the 0-11 month condition ($M = 102.00$, $SD = 27.75$). Fourth, the post hoc test indicated that the mean score for the 21 plus condition ($M = 91.19$, $SD = 12.78$) was significantly different from the 0-11 month condition ($M = 102.00$, $SD = 27.75$). Fifth, the post hoc test indicated that the mean score for the 6-10 year condition ($M = 91.10$, $SD = 18.19$) significantly differed from the 1-5 year condition ($M = 100.41$, $SD = 22.33$). Sixth, the post hoc test indicated that the mean score for the 11-15 year condition ($M = 91.84$, $SD = 11.58$) significantly differed from the 1-5 year condition ($M = 100.41$, $SD = 22.33$). Seventh, the post hoc test indicated that the mean score for the 16-20 year condition ($M = 88.76$, $SD = 13.61$) significantly differed from the 1-5 year condition ($M = 100.41$, $SD = 22.33$). Lastly, the post hoc test indicated that the mean score for the 21-plus-year condition ($M = 91.19$, $SD = 12.78$) significantly differed from the 1-5-year condition ($M = 100.41$, $SD = 22.33$).

Table 3

Fishers LSD Post Hoc Test for Research Question Three

Dependent Variable: Empathy						
LSD						
(I) Time	(J) Time	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
0-11	1-5	1.595	4.768	.738	-7.80	10.99
	6-10	10.905*	4.670	.020	1.71	20.10
	11-15	10.159*	4.637	.029	1.02	19.29
	16-20	13.241*	4.506	.004	4.37	22.12
	21+	10.815*	4.506	.017	1.94	19.69
1-5	0-11	-1.595	4.768	.738	-10.99	7.80
	6-10	9.310*	3.809	.015	1.81	16.81

Dependent Variable: Empathy						
LSD						
(I) Time	(J) Time	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	Upper Bound
6-10	11-15	8.564*	3.768	.024	1.14	15.99
	16-20	11.646*	3.605	.001	4.54	18.75
	21+	9.220*	3.605	.011	2.12	16.32
	0-11	-10.905*	4.670	.020	-20.10	-1.71
	1-5	-9.310*	3.809	.015	-16.81	-1.81
11-15	11-15	-.746	3.644	.838	-7.92	6.43
	16-20	2.336	3.475	.502	-4.51	9.18
	21+	-.090	3.475	.979	-6.94	6.76
	0-11	-10.159*	4.637	.029	-19.29	-1.02
	1-5	-8.564*	3.768	.024	-15.99	-1.14
16-20	6-10	.746	3.644	.838	-6.43	7.92
	16-20	3.082	3.431	.370	-3.68	9.84
	21+	.656	3.431	.849	-6.10	7.41
	0-11	-13.241*	4.506	.004	-22.12	-4.37
	1-5	-11.646*	3.605	.001	-18.75	-4.54
21+	6-10	-2.336	3.475	.502	-9.18	4.51
	11-15	-3.082	3.431	.370	-9.84	3.68
	21+	-2.426	3.251	.456	-8.83	3.98
	0-11	-10.815*	4.506	.017	-19.69	-1.94
	1-5	-9.220*	3.605	.011	-16.32	-2.12
	6-10	.090	3.475	.979	-6.76	6.94
	11-15	-.656	3.431	.849	-7.41	6.10
	16-20	2.426	3.251	.456	-3.98	8.83

Note. Significant difference found between bachelors and high school, $p < 0.05$. No other significant differences were found.

Hypothesis Four

Listed below are the fourth research question and null hypothesis for the study:

RQ4: *Does time in service affect the levels of conscientiousness within law enforcement officers?*

- H₀₄: There is no significant difference between time in service and levels of conscientiousness within law enforcement officers.

A one-way between-subjects ANOVA was conducted to compare the effect of time in service on conscientiousness in 0-11 months, 1-5 years, 6-10 years, 11-15 years, 16-20 years, and 21-plus year conditions. There was no statistically significant effect of time in service on conscientiousness at the $p < .05$ level for the six conditions [$F(5, 244) = 1.964, p = 0.085, \eta^2 = 0.039$]. The eta squared score of 0.051 indicated a medium effect size. The researcher accepted the null hypothesis since the p – value was greater than 0.05. Therefore, the researcher did not conduct any post hoc tests.

Hypothesis Five

As stated before, for the last two research questions, the researcher utilized two-way ANOVAs to analyze the data. Listed below are the fifth research question and null hypotheses for the study:

RQ5: *Does the level of education and time in service have a combined effect on levels of empathy within law enforcement officers?*

- H_{05(A)}: There is no significant difference between both education level and time in service and levels of empathy in law enforcement officers.
- H_{05(B)}: There is no difference between the mean empathy score of different education levels of law enforcement officers.
- H_{05(C)}: There is no difference between the mean empathy score of the different durations of time in service of law enforcement officers.

A two-way ANOVA was performed to evaluate the effects of education and time in service on empathy levels in law enforcement officers. The means and standard deviations of education and time in service for empathy levels are presented in the table below.

Table 4

Means and Standard Deviations Descriptive Statistics

Dependent Variable: Empathy				
Education	Time	Mean	Std. Deviation	N
High School	0-11	98.36	29.820	11
	1-5	94.00	24.083	6
	6-10	86.56	17.446	18
	11-15	91.80	14.177	25
	16-20	81.65	7.815	20
	21+	85.10	16.656	10
	Total	88.70	17.766	90
Associates	0-11	64.00	.	1
	1-5	115.67	12.832	6
	6-10	90.80	13.293	5
	11-15	85.67	7.234	3
	16-20	85.60	14.605	5
	21+	95.00	.	1
	Total	94.86	18.443	21
Bachelors	0-11	109.67	20.017	6
	1-5	99.52	23.316	23
	6-10	92.60	16.978	15
	11-15	93.63	8.141	8
	16-20	94.77	17.191	13
	21+	90.00	13.328	17
	Total	95.70	18.291	82
Masters	0-11	134.00	.	1
	1-5	84.00	8.485	2
	6-10	106.25	27.837	4
	11-15	92.71	6.157	7
	16-20	90.08	11.720	12
		84.00	8.485	2

Dependent Variable: Empathy				
Education	Time	Mean	Std. Deviation	N
PhD	21+	92.35	6.492	23
	Total	93.49	12.672	49
	11-15	91.00	.	1
	16-20	104.75	7.632	4
	21+	108.00	23.516	3
Total	Total	104.25	14.636	8
	0-11	102.00	27.751	19
	1-5	100.41	22.333	37
	6-10	91.10	18.190	42
	11-15	91.84	11.580	44
	16-20	88.76	13.612	54
	21+	91.19	12.783	54
	Total	92.95	17.304	250

Note. Descriptive statistics concerning the means and standard deviations of education and time in service.

The results indicated a significant main effect for education, $F(17, 223) = 3.15, p = .02$, partial $\eta^2 = .05$; no significant main effect for time in service, $F(17, 223) = 1.54, p = .18$, partial $\eta^2 = .03$; and a no significant interaction between education and time in service, $F(17, 223) = 1.47, p = .11$, partial $\eta^2 = .10$. The effect size for education and time in service was small. The effect size for education and time in service combined was medium.

Table 5

Results of Two-Way ANOVA and Partial Eta Squared for Research Question Five

Dependent Variable: Empathy						
Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	15425.966 ^a	26	593.306	2.238	<.001	.207
Intercept	691675.978	1	691675.978	2608.537	<.001	.921
Education	3338.237	4	834.559	3.147	.015	.053
Time	2036.342	5	407.268	1.536	.180	.033
Education * Time	6630.517	17	390.030	1.471	.107	.101
Error	59130.358	223	265.159			
Total	2234389.000	250				
Corrected Total	74556.324	249				

Note. A two-way ANOVA indicated no significant difference in the combined effects of education and time in service on empathy levels, $p > 0.05$. Education did have a statistically significant impact on empathy levels, $p < 0.05$. However, time in service did not have a statistically significant impact on empathy levels, $p > 0.05$. The combined effect of education and time in service had a medium effect size, $\eta_p^2 = 0.101$. Education had a small effect size, $\eta_p^2 = 0.053$. Lastly, time in service had a small effect size, $\eta_p^2 = 0.033$.

Since the second null hypothesis under the fifth research question was rejected, the researcher conducted a pairwise comparison utilizing Fisher's LSD. A simple main effects test indicated that empathy levels were significantly higher for law enforcement officers with a bachelor's degree than those with a high school diploma/GED ($p = .005$). A simple main effects test also indicated that empathy levels were significantly higher for law enforcement officers with a PhD than those with a high school diploma/GED ($p = .010$). No other significant differences were found between the empathy levels of law enforcement officers and the other levels of education.

Table 6

Pairwise Comparison of Education for Research Question Five

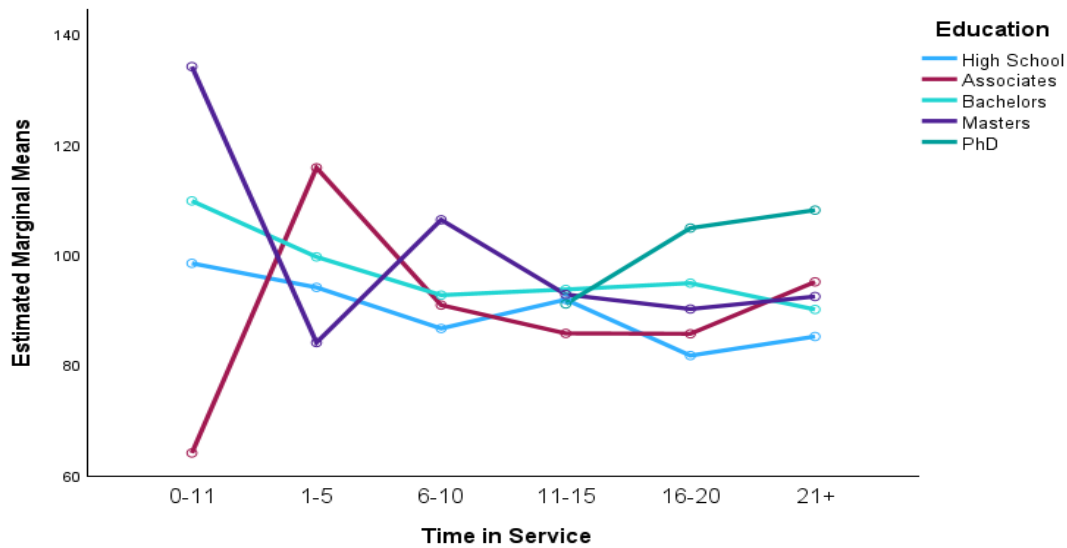
Dependent Variable: Empathy
LSD

(I) Education	(J) Education	Mean		Sig.	95% Confidence Interval	
		Difference (I-J)	Std. Error		Lower Bound	Upper Bound
High School	Associates	-6.16	3.946	.120	-13.93	1.62
	Bachelors	-7.00*	2.486	.005	-11.89	-2.10
	Masters	-4.79	2.891	.099	-10.49	.91
	PhD	-15.55*	6.008	.010	-27.39	-3.71
Associates	High School	6.16	3.946	.120	-1.62	13.93
	Bachelors	-.84	3.982	.834	-8.69	7.01
	Masters	1.37	4.247	.748	-7.00	9.74
	PhD	-9.39	6.765	.166	-22.73	3.94
Bachelors	High School	7.00*	2.486	.005	2.10	11.89
	Associates	.84	3.982	.834	-7.01	8.69
	Masters	2.21	2.940	.454	-3.59	8.00
	PhD	-8.55	6.031	.157	-20.44	3.33
Masters	High School	4.79	2.891	.099	-.91	10.49
	Associates	-1.37	4.247	.748	-9.74	7.00
	Bachelors	-2.21	2.940	.454	-8.00	3.59
	PhD	-10.76	6.209	.084	-23.00	1.48
PhD	High School	15.55*	6.008	.010	3.71	27.39
	Associates	9.39	6.765	.166	-3.94	22.73
	Bachelors	8.55	6.031	.157	-3.33	20.44
	Masters	10.76	6.209	.084	-1.48	23.00

Note. Pairwise comparison found a mean difference between high school and bachelors ($p < 0.05$) and high school and PhD ($p < 0.05$).

Figure 3

Pairwise Comparison Plot of Education and Time in Service for Research Question Five



Note. This is a line graph showing mean empathy levels for different educational levels regarding the duration of time in service for law enforcement officers.

Hypothesis Six

Listed below are the last research question and null hypotheses for the study:

RQ6: *Does the level of education and time in service have a combined effect on levels of conscientiousness within law enforcement officers?*

- H₀6(A): There is no significant difference between both education level and time in service and levels of conscientiousness in law enforcement officers.
- H₀6(B): There is no difference between the mean conscientiousness score of different education levels of law enforcement officers.
- H₀6(C): There is no difference between the mean conscientiousness score of the different durations of time in service of law enforcement officers.

The last two-way ANOVA was performed to evaluate the effects of education and time in service on conscientiousness levels in law enforcement officers. The means and standard

deviations of education and time in service for conscientiousness levels are presented in the table below.

Table 7

Means and Standard Deviations Descriptive Statistics

Dependent Variable: Conscientiousness				
Education	Time	Mean	Std. Deviation	N
High School	0-11	163.91	47.826	11
	1-5	159.17	41.097	6
	6-10	155.61	31.875	18
	11-15	154.24	25.119	25
	16-20	144.00	14.161	20
	21+	152.70	26.462	10
	Total	153.58	29.439	90
Associates	0-11	97.00	.	1
	1-5	172.33	28.472	6
	6-10	163.00	31.177	5
	11-15	160.00	29.715	3
	16-20	137.20	9.284	5
	21+	150.00	.	1
	Total	155.33	29.343	21
Bachelors	0-11	208.83	19.260	6
	1-5	170.26	42.297	23
	6-10	166.47	32.843	15
	11-15	168.50	33.781	8
	16-20	167.38	29.846	13
	21+	156.35	26.608	17
	Total	168.88	34.912	82
Masters	0-11	213.00	.	1
	1-5	149.50	31.820	2
	6-10	171.25	47.451	4
	11-15	177.14	30.102	7
	16-20	159.00	25.993	12
	21+	157.35	20.821	23
	Total	162.53	27.244	49
PhD	11-15	164.00	.	1
	16-20	182.75	28.123	4
	21+	169.00	11.000	3

Dependent Variable: Conscientiousness				
Education	Time	Mean	Std. Deviation	N
Total	Total	175.25	20.988	8
	0-11	177.16	47.369	19
	1-5	167.68	38.819	37
	6-10	161.86	32.907	42
	11-15	161.09	28.021	44
	16-20	155.20	25.297	54
	21+	156.69	23.017	54
	Total	161.19	31.319	250

Note. Descriptive statistics concerning the means and standard deviations of education and time in service.

The results indicated a significant main effect for education, $F(17, 223) = 1.03$, $p = .001$, partial $\eta^2 = .076$; no significant main effect for time in service, $F(17, 223) = .572$, $p = .722$, partial $\eta^2 = .013$; and a no significant interaction between education and time in service, $F(17, 223) = 1.031$, $p = .426$, partial $\eta^2 = .073$. The effect size for education was medium. The effect size for education and time in service combined was also medium. The effect size for time in service was small.

Table 8

Results of Two-Way ANOVA and Partial Eta Squared for Research Question Six

Dependent Variable: Conscientiousness						
Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	41237.935 ^a	26	1586.074	1.742	.018	.169
Intercept	2025770.145	1	2025770.14	2225.300	<.001	.909
Education	16592.088	4	4148.022	4.557	.001	.076

Dependent Variable: Conscientiousness						
Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Time	2601.492	5	520.298	.572	.722	.013
Education *	15948.547	17	938.150	1.031	.426	.073
Time						
Error	203004.849	223	910.336			
	6739958.000					
	6739958.000	250				
Total		250				
Corrected Total	244242.784	249				

Note. A two-way ANOVA indicated no significant difference in the combined effects of education and time in service on conscientiousness levels, $p > 0.05$. Education did have a statistically significant effect on conscientiousness levels, $p < 0.05$. However, time in service did not have a statistically significant effect on conscientiousness levels, $p > 0.05$. The combined effect of education and time in service had a medium effect size, $\eta_p^2 = 0.073$. Education had a medium effect size, $\eta_p^2 = 0.076$. Lastly, time in service had a small effect size, $\eta_p^2 = 0.013$.

Since the second null hypothesis under the sixth research question was rejected, the researcher conducted a pairwise comparison utilizing Fisher's LSD. Simple main effects tests indicated that conscientiousness levels were significantly higher for law enforcement officers with a bachelor's degree than officers with a high school diploma ($p = .001$). No other significant differences were found between the conscientiousness levels of law enforcement officers and the other levels of education.

Table 9

Pairwise Comparison of Education for Research Question Six

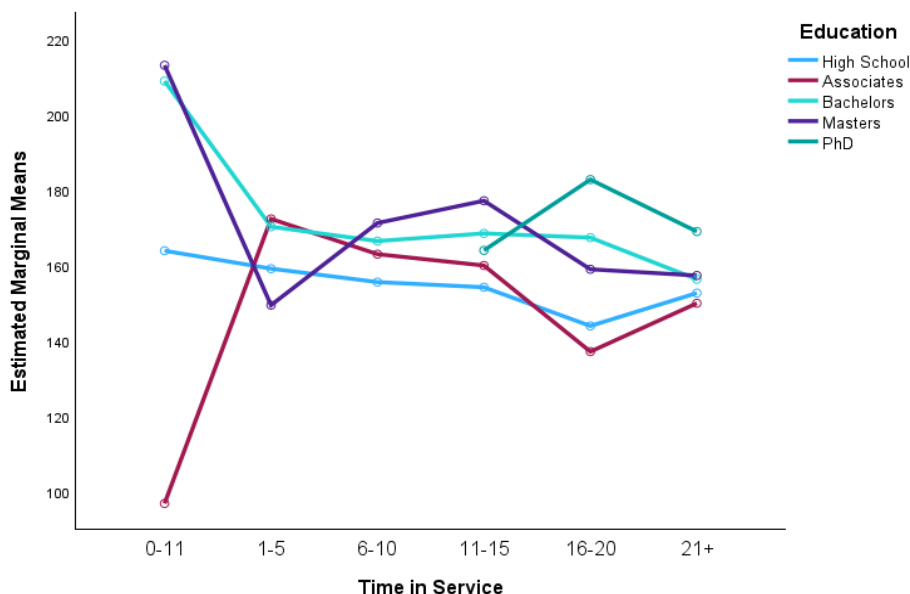
Dependent Variable: Conscientiousness						
LSD						
(I) Education	(J) Education	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
High School	Associates	-1.76	7.312	.810	-16.16	12.65
	Bachelors	-15.30*	4.606	.001	-24.38	-6.22

Dependent Variable: Conscientiousness						
LSD						
(I) Education	(J) Education	Mean Difference (I- J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	Upper Bound
Associates	Masters	-8.95	5.357	.096	-19.51	1.60
	PhD	-21.67	11.131	.053	-43.61	.26
	High School	1.76	7.312	.810	-12.65	16.16
	Bachelors	-13.54	7.379	.068	-28.09	1.00
Bachelors	Masters	-7.20	7.869	.361	-22.71	8.31
	PhD	-19.92	12.536	.114	-44.62	4.79
	High School	15.30*	4.606	.001	6.22	24.38
	Associates	13.54	7.379	.068	-1.00	28.09
Masters	Masters	6.35	5.448	.245	-4.39	17.08
	PhD	-6.37	11.176	.569	-28.40	15.65
	High School	8.95	5.357	.096	-1.60	19.51
	Associates	7.20	7.869	.361	-8.31	22.71
PhD	Bachelors	-6.35	5.448	.245	-17.08	4.39
	PhD	-12.72	11.505	.270	-35.39	9.95
	High School	21.67	11.131	.053	-.26	43.61
	Associates	19.92	12.536	.114	-4.79	44.62
	Bachelors	6.37	11.176	.569	-15.65	28.40
	Masters	12.72	11.505	.270	-9.95	35.39

Note. The pairwise comparison found a mean difference between high school and bachelors ($p < 0.05$).

Figure 4

Pairwise Comparison Plot of Education and Time in Service for Research Question Six



Note. A line graph showing mean conscientiousness levels for different educational levels for law enforcement officers during their time in service.

CHAPTER FIVE: CONCLUSIONS

Overview

Chapter five of the research paper is divided into five sections: discussion, implications, limitations, recommendations, and conclusion. The discussion section provides a brief overview of the entire study. The discussion section also examines if the study's results correlate with previous studies. The implications section argues that the current study expands on previous research. The limitations section discusses the threats to both internal and external validity. The recommendations section provides a list of how future research could be conducted. Lastly, the conclusion section summarizes the overall study and research paper.

Discussion

The overall purpose of this study was to research how education and time in service affect the levels of empathy and conscientiousness in law enforcement officers. The participants in the study were law enforcement officers employed by 15 law enforcement agencies

throughout Virginia. The participants were asked to complete a three-part questionnaire: a demographic questionnaire, the Interpersonal Reactivity Index, and the UFFM-I Conscientiousness Scale. The results of the questionnaires were recorded and analyzed through SPSS. It was through analyzing the data that the researcher was able to answer the six research questions for the study.

Research Question One

The researcher addressed the following research question in the study: Does the level of education affect the levels of empathy within law enforcement officers? The null hypothesis for research question one was rejected. A Fishers LSD post hoc test indicated that law enforcement officers with a bachelor's degree had significantly higher empathy levels than law enforcement officers with a high school diploma/GED. The post hoc test also indicated that law enforcement officers with a Ph.D. also had significantly higher empathy levels than law enforcement officers with a high school diploma/GED. Other studies support the results of the first research question.

One study researched how age, gender, and education affect individuals' affective and cognitive empathy levels. The study's results found that age, educational level, and gender significantly impacted affective empathy levels but did not significantly impact cognitive empathy levels (Yaghoubi Jami et al., 2021). Another research study focused on how a Peace Education Program impacts the empathy levels of individuals. The study's results found that participants assigned to the program had significantly higher empathy levels than the control group (Sagkal et al., 2021). Another study investigated whether educational level could affect cognitive empathy. Results of the study found that participants with a college education had higher cognitive empathy scores than participants with only a high school diploma (Gutiérrez-

Cobo et al., 2023). While empathy is considered an inherent trait, other studies have shown that empathy is also refined through schooling (Yaghoubi Jami et al., 2021; Sagkal et al., 2021).

Research Question Two

The researcher addressed the following research question in the study: Does the level of education affect the levels of conscientiousness in law enforcement officers? The null hypothesis for research question two was rejected. A Fishers LSD post hoc test indicated that law enforcement officers with a bachelor's degree had significantly higher levels of conscientiousness than law enforcement officers with a high school diploma/GED. Other studies support the results of the second research question.

One study researched how different social influences impact conscientiousness levels. The study mainly focused on how social status, education, and occupation affect conscientiousness in adults. Focusing more on education, the study's results found that participants with a college degree had higher levels of conscientiousness than those with a high school diploma (Furnham & Cheng, 2020). Another study was conducted to determine if different college educational levels significantly impacted conscientiousness levels. The other college educational levels studied were bachelor's, master's, and PhD. Results of the study found that the participants with a bachelor's degree had significantly higher levels of conscientiousness than participants with a master's or PhD (Savelyev, 2022). Lastly, another study was conducted to determine if education could predict conscientiousness gaps. Participants were separated into groups based on education level if they had a high school diploma or a college degree. Results of the study found that participants with a college degree had significantly higher levels of conscientiousness than participants with a high school diploma (Verbree et al., 2023).

Research Question Three

The researcher addressed the following research question: Does time in service affect the levels of empathy among law enforcement officers? The null hypothesis for research question three was rejected. A Fishers LSD post hoc test indicated multiple significant differences between each of the durations of time in service and levels of conscientiousness in law enforcement officers. Law enforcement officers who had a duration of 6-10, 11-15, 16-20, and 21-plus years had significantly higher levels of empathy than law enforcement officers employed between 0-11 months. Also, law enforcement officers who had a duration of 6-10, 11-15, 16-20, and 21-plus years had significantly higher levels of empathy than law enforcement officers between 1-5 years. While there are no previous studies that primarily focus on the effect time in service affects empathy in law enforcement, there are other studies that focus on how empathy levels change throughout lifespans. In other words, how empathy levels change with experiences. Overall, previous studies support the findings of the study.

One study, utilizing a longitudinal research design, researched how empathy levels change throughout adult life. Participants were first tested at 18 years of age and tested again at 55 years of age. The study's results found a significant increase in empathy levels between the first and second testing (Grühn et al., 2022). Another study, also utilizing a longitudinal design, researched if there was a significant difference in empathy levels in nurses before and after three years. The study's results found a significant increase in empathy levels after three years (Cunico et al., 2023).

Research Question Four

The researcher addressed the following research question: Does time in service affect the levels of conscientiousness among law enforcement officers? The null hypothesis for research

question four was accepted, which means no significant differences were found between the durations of time in service and levels of conscientiousness in law enforcement officers.

Therefore, the researcher did not conduct any post hoc tests. Other studies do not support the results of the fourth research question. This means that previous studies have found a significant difference between time in service and levels of conscientiousness in individuals.

The first study does not support whether changes occur in the big five personality characteristics before and after law enforcement academy training. Focusing on conscientiousness, the study's results found a significant increase in participant conscientiousness before and after training (Mitchell, 2021). Another study researched if the daily stress of being in law enforcement changes the personality of police officers. The researcher focused on the big five personality traits. The study utilized a longitudinal design where the participants' personality scores were measured after their first and last day on the force. Focusing on the personality trait conscientiousness, the study's results found that participants had a significant increase in conscientiousness levels compared to the baseline scores (Paton, 2019).

Research Question Five

The researcher addressed the following research question in the study: Does the level of education and time in service have a combined effect on levels of empathy among law enforcement officers? The null hypothesis for research question five was accepted, meaning no significance was found. However, as stated before, a two-way ANOVA allows a researcher to test three null hypotheses. Therefore, the second null hypothesis was rejected under the fifth research question, and the third null hypothesis was accepted, which means that the results found a significance between education and empathy levels but no significance between time in service

and empathy levels. Therefore, a Fishers LSD post hoc test was only conducted on the second null hypothesis under the fifth research question.

The post hoc test indicated that law enforcement officers with a bachelor's degree had significantly higher empathy scores than law enforcement officers with a high school diploma/GED. The post hoc test also indicated that law enforcement officers with a Ph.D. had significantly higher empathy scores than law enforcement officers with a high school diploma/GED. However, while the results of the previous research questions have been supported or contradicted by previous studies, no studies have been conducted to research the combined effect education and time in service have on empathy in law enforcement officers. Therefore, the results of the fifth research question cannot be supported or contradicted by previous studies.

Research Question Six

Lastly, the researcher addressed the following research question in the study: Does the level of education and time in service have a combined effect on levels of conscientiousness within law enforcement officers? The overall null hypothesis for the last research question was accepted, meaning no significance was found. Like the fifth research question, question six also had three null hypotheses. Under the sixth research question, the second null hypothesis was rejected, and the third null hypothesis was accepted, which means that the results found a significance between education and conscientiousness levels but no significance between time in service and conscientiousness levels. Therefore, a Fishers LSD post hoc test was only conducted on the second null hypothesis under the sixth research question.

The post hoc test results only found a significant difference in conscientiousness levels between participants who had a bachelor's and participants who had a high school diploma. Also,

similar to the fifth research question, no studies have been conducted to research the combined effect of education and time in service on law enforcement officers' conscientiousness.

Therefore, the results of the sixth research question also cannot be supported or contradicted by previous studies. However, Another way the results of a study can be supported or contradicted is through theories. However, no theories specifically address how education and time in service affect law enforcement officers' empathy and conscientiousness levels.

Theories and Results

While no specific theory or theories address how education and time in service affect empathy in law enforcement officers, there are theories that address the study's findings. In particular, multiple theories focus on how learning (education) and experience (time in service) affect personality development. The first psychological theory that addresses the results is the Theory of Mind.

Theory of mind was developed in 1978 by researchers David Premack and Guy Woodruff. Theory of mind refers to an individual's ability to think about their mental state and that of others (Leslie et al., 2020). In other words, the theory of mind encompasses an individual's ability to identify mental states. The components of mental states include emotions, desires, and beliefs (Astington & Jenkins, 2021). Theory of mind also addresses the ability of individuals to recognize the mental state of others, which is the premise behind empathy. The theory of mind develops as individuals gain experience. These experiences can either be through social interactions or education. Overall, the development of the theory of mind is contingent on social interactions and/or education (Leslie et al., 2020; Astington & Jenkins, 2021).

The second theory focuses on how learning impacts personality development in general. These theories are referred to as Learning theories. Researchers Lev Vygotsky, Albert Bandura,

and B.F. Skinner is most famous for developing learning theories. However, all learning theories propose that personality development is influenced by observable behavior, the cause and effect of different stimuli (experience), and learning/education (Spence, 2020).

The last theory that broadly addresses the study's findings is the humanist theory. Carl Rogers and Abraham Maslow developed humanist theories. Humanist theories of personality propose that individual experiences influence personality development. In other words, under humanist theories, personality development is contingent on self-actualization, which is the need for personal growth (Cloninger, 2019). According to Cloninger (2019), personal growth can be achieved through social interactions, education, and/or experience. Overall, multiple previous theories have suggested that daily experiences can affect the development of personality traits (Borghuis et al., 2019; Grühn et al., 2022).

Implications

As outlined in the literature review, researchers have conducted multiple studies on topics related to law enforcement officer personality. Notably, previous research has focused on how individual characteristics affect the personality traits of law enforcement officers. The different individual characteristics studied include age, sex, education, and time in service. The personality traits studied were the big five personality traits: openness, conscientiousness, empathy, agreeableness, and neuroticism. However, for this research study, the researcher focused more on the studies that addressed the effect education and time in service had on empathy and conscientiousness.

Multiple studies found that education significantly impacted empathy (Sutherland, 2019; Fesbach, 2019; Smith & Aamodt, 2017). Previous studies also found that education significantly impacted conscientiousness (Rydberg & Terrill, 2017; Jackson, 2018). Previous studies also

found that time in service significantly impacted empathy (Kirkcaldy et al., 2018; Waldman, 2017). Lastly, the results of a previous study found that time in service had a significant impact on conscientiousness (Challacombe et al., 2019). Overall, the findings of these previous studies correlate with the current study's findings. However, no previous studies have been conducted that study the combined effect of education and time in service on law enforcement officers' empathy and conscientiousness. Therefore, this study expanded on previous research.

The study's overall results show that different areas of law enforcement can be improved. As stated before, the different areas that could benefit from law enforcement organizations knowing education, time in service, empathy, and conscientiousness are victim interactions, witnessing crime, community interactions, hiring, job retention, and job dedication. By promoting and improving levels of empathy and conscientiousness and understanding the different aspects that could affect those traits, law enforcement organizations can make more informed decisions when hiring new police officers (Sanders, 2018). According to Sanders (2018), hiring more good police officers improves the public's perception of police officers, improving the relationship between law enforcement officers and the public.

Limitations

Within the study, there were no threats to internal validity. Internal validity is the extent to which a researcher can be confident that other factors cannot explain the cause-and-effect relationship established in the study (Jimenez-Buedo & Miller, 2019). Results of the study found that when education or time in service increased, levels of empathy or conscientiousness also increased. However, while there were no threats to internal validity, there were multiple threats to external validity. External validity is the ability to generalize the study's results to other measures, situations, individuals, and/or settings (Calder et al., 2017). The first threat to external

validity is the inability to generalize the results to other populations, also called population validity. Population validity refers to how findings from a study based on the sample could be generalized to a larger group/ population (Calder et al., 2017). As stated before, participants for the study were law enforcement officers from 15 police departments in Virginia. As a result of just gathering data from police departments in Virginia, the researcher could not generalize the study's results to any other police department in the United States.

The second threat to external validity was sampling bias. Sampling bias refers to the sample not being representative of the population. As stated before, the study sample only included law enforcement officers employed in Virginia. The last threat to external validity is referred to as the Hawthorne effect. The Hawthorne effect is the tendency for participants to change behavior simply because they know what is being studied (Diaper, 2019). When completing the three-part questionnaire, participants were informed what was being studied. Therefore, this could have influenced how the participants answered the questionnaire questions. Overall, the researcher can make recommendations for future research by identifying and addressing the study's limitations.

Recommendations for Future Research

The following are recommendations for future research:

Replication

- Conduct the same study again with an increased time frame.
- Ensure that other factors did not explain the cause-and-effect relationship established by the original study.

Expand

- Conduct the study researching law enforcement organizations outside Virginia.

- Study the effect education and time in service have on other personality traits.
- Through expansion, future researchers will be able to counter threats most, if not all, threats to external validity by improving generalizability to other settings, populations, and conditions.

Compare

- Compare how education and time in service influence the personality traits of college and state law enforcement officers.

Longitudinal

- Focusing more on time in service, conduct a study where the personality traits of law enforcement officers are studied on the first day of joining the force and the day after retiring.

Conclusion

As stated before, the purpose of the study was to research the effect that education and time in service had on levels of empathy and conscientiousness in law enforcement officers. The independent variables were level of education and time in service. The dependent variables were levels of empathy and conscientiousness. The participants were asked to complete a three-part questionnaire that gathered data on the officer's age, sex, education level, time in service, empathy score, and conscientiousness score. The study's results found a significant difference between education and empathy, education and conscientiousness, and time in service and empathy. The study also found no significant difference between time in service and conscientiousness, the combined effect of education and time in service and empathy, and the combined effect of education and time in service and conscientiousness. Multiple previous studies and theories supported the overall results of the study. While the study results were

supported, there were still multiple threats to external validity centering around the generalizability of the results. However, understanding the study's limitations allowed the researcher to make multiple recommendations for future research. Some of the recommendations were replication and expansion. Overall, through conducting the study, the researcher expanded on previous research by determining if there was a correlation between education level and time in service and levels of empathy and conscientiousness in law enforcement officers.

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Appendix A

Demographic Questionnaire

Age: _____

Sex:

Female Male Other

Education Level:

High School Diploma/GED Associates Degree Bachelor's Degree Master's Degree

Doctoral Degree

Time in Service:

Zero to 11 Months 1 to 5 Years 6 to 10 Years 11 to 15 Years 16 to 20 years 21

Plus Years

Appendix B

Interpersonal Reactivity Index Questionnaire

Each item is rated on a 5-point Likert scale where:

1 = Does not describe me well 2 = Somewhat describes me 3 = Neutral

4 = Describes me a little 5 = Describes me well

1.	I daydream and fantasize, with some regularly, about things that might happen to me.	1	2	3	4	5
2.	I often have tender, concerned feelings for people less fortunate than me.	1	2	3	4	5
3.	I sometimes find it difficult to see things from the "other guy's" point of view.	1	2	3	4	5
4.	Sometimes I do not feel very sorry for other people when they are having problems.	1	2	3	4	5
5.	I really get involved with the feelings of the characters in a novel.	1	2	3	4	5
6.	In emergency situations, I feel apprehensive and ill at-ease.	1	2	3	4	5
7.	I am usually objective when I watch a movie or play, and I do not often get completely caught up in it.	1	2	3	4	5
8.	I try to look at everybody's side of a disagreement before I make a decision.	1	2	3	4	5
9.	When I see someone being taken advantage of, I feel kind of protective towards them.	1	2	3	4	5
10.	I sometimes feel helpless when I am in the middle of a very emotional situation.	1	2	3	4	5
11.	I sometimes try to understand my friends better by imagining how things look from their perspective.	1	2	3	4	5
12.	Becoming extremely involved in a good book or movie is somewhat rare for me.	1	2	3	4	5
13.	When I see someone get hurt, I tend to remain calm.	1	2	3	4	5
14.	Other people's misfortunes do not usually disturb me a great deal.	1	2	3	4	5
15.	If I am sure I am right about something, I do not waste much time listening to other people's arguments.	1	2	3	4	5
16.	After seeing a play or movie, I have felt as though I were one of the characters.	1	2	3	4	5
17.	Being in a tense emotional situation scares me.	1	2	3	4	5
18.	When I see someone being treated unfairly, I sometimes do not feel very much pity for them.	1	2	3	4	5
19.	I am usually pretty effective in dealing with emergencies.	1	2	3	4	5
20.	I am often quite touched by things that I see happen.	1	2	3	4	5

21.	I believe that there are two sides to every question and try to look at them both.	1	2	3	4	5
22.	I would describe myself as a pretty soft-hearted person.	1	2	3	4	5
23.	When I watch a good movie, I can very easily put myself in the place of a leading character.	1	2	3	4	5
24.	I tend to lose control during emergencies.	1	2	3	4	5
25.	When I am upset at someone, I usually try to put myself in his shoe's for a while.	1	2	3	4	5
26.	When I am reading an interesting story or novel, I imagine how I would feel if the events in the story were happening to me.	1	2	3	4	5
27.	When I see someone who badly needs help in an emergency, I go to pieces.	1	2	3	4	5
28.	Before criticizing somebody, I try to imagine how I would feel if I were in their place.	1	2	3	4	5

Access to the Interpersonal Reactivity Index can be achieved through the public domain. The Interpersonal Reactivity Index can be accessed through the following hyperlink provided below:

Interpersonal Reactivity Index (IRI). (2024, June 3). Fetzer Institute.

<https://fetzer.org/sites/default/files/images/stories/pdf/selfmeasures/EMPATHY-InterpersonalReactivityIndex.pdf>

Appendix C

UFFM-I Conscientiousness Scale

Each item is rated on a 5-point Likert scale where:

1 = Strongly Disagree 2 = Disagree 3 = Neither Agree or Disagree

4 = Agree 5 = Strongly Agree

1.	I tend to do just enough work to get by.	1	2	3	4	5
2.	I procrastinate a lot.	1	2	3	4	5
3.	My performance at work is always adequate, no more and no less.	1	2	3	4	5
4.	I am good about getting things done on time but sometimes I do not manage my time well.	1	2	3	4	5
5.	I would say I understand things at a normal pace.	1	2	3	4	5
6.	I would say my self-discipline is about the same as most people's.	1	2	3	4	5
7.	I would say I am more disciplined than most, but there is a lot of people with better self-discipline than me.	1	2	3	4	5
8.	I prefer to be above average at things but do not have to be the very best.	1	2	3	4	5
9.	I usually excel in what I am doing but occasionally I will do mediocre at something.	1	2	3	4	5
10.	I love to win, but I am not a sore loser.	1	2	3	4	5
11.	If there is a problem, I can usually solve it.	1	2	3	4	5
12.	I always go above and beyond what is expected.	1	2	3	4	5
13.	I always follow through with my plans.	1	2	3	4	5
14.	I do not keep my room clean.	1	2	3	4	5
15.	I let my room get kind of messy but I do not let it get out of control.	1	2	3	4	5
16.	I would not describe myself as messy or clean, my organization is average.	1	2	3	4	5
17.	I follow the rules about as much as most people.	1	2	3	4	5
18.	I would never jump into doing something without thinking about it.	1	2	3	4	5

19.	I am very well organized.	1	2	3	4	5
20.	I always respect authority figures, even if I disagree with them.	1	2	3	4	5

Any not-for-profit research or practice may use the UFFM-I measure and associated scoring program with appropriate scale citation (Carter & LoPilato, 2014). Access to the UFFM-I can be achieved through the public domain. The UFFM-I can be accessed through the following hyperlink provided below:

Unfolding Five Factor Model Inventory (UFFM-I) Conscientiousness (20 Items). (2014, July

9). Psychology Journal. <https://psychology.uga.edu/sites/default/files/pictures/UFFM-I%20Consc%20Items.pdf>