

A CORRELATIONAL STUDY EXAMINING THE RELATIONSHIP BETWEEN POLICE  
OFFICER EDUCATION AND SUPERVISORY EVALUATIONS OF PERFORMANCE  
IN A MEDIUM-SIZED LAW ENFORCEMENT AGENCY IN TENNESSEE

by

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Dissertation Submitted to the Doctoral Program  
of the American College of Education  
in partial fulfillment of the requirements for the degree of  
DOCTOR OF EDUCATION

April, 2018

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## Abstract

There is no research-based consensus about the benefits of a postsecondary education as it relates to police officer job performance, leaving police executives with little guidance when establishing educational hiring criteria. The purpose of this quantitative correlational study was to determine the degree to which the possession of a postsecondary education degree was correlated with measures of police officer job performance in a medium-sized municipal law enforcement agency in the state of Tennessee. This measurement was accomplished by examining 206 numerical annual supervisory performance evaluations and education data for 85 police officers during a three-year period (2013–2015). This sample represented all nonsupervisory police officers employed by the agency of interest who received performance evaluations for the position of police officer during the study period. The study was designed to determine if a positive correlation existed between possessing a postsecondary education degree and supervisory ratings of police officer performance in four categories: general professionalism, productivity, technical knowledge, and management skills. No significant correlations were found in the sample between education and supervisory ratings of general professionalism and productivity. Significant positive, but weak correlations were found in the sample between education and supervisory ratings of technical knowledge ( $r = .172, p = .014$ ) and management skills ( $r = .146, p = .036$ ). This study showed mixed and inconclusive results about the relationship between police officer education and performance, consistent with existing literature. The study's findings provided the basis for recommendations to law enforcement executives and future researchers wishing to gain further insight into the relationship between police officer education and performance.

## Dedication

This dissertation is dedicated to my family, who have been a source of support and encouragement throughout my life, including my professional and academic journeys. My parents, John and Joyce Smalley, instilled in me the value of education and hard work from an early age while providing me with all the resources I could ever need to achieve success. My wife, Kristen, and my daughter, Brianna, have provided love and support while dealing with the unusual schedule, worries, and absences that come with living with a police officer and graduate student. I look forward to seeing Brianna continue to grow and achieve the types of professional and academic successes I have been lucky enough to experience.

This dissertation is also dedicated to the men and women in law enforcement who have served in the past and those who continue to dedicate their lives to serving their communities. I have had the pleasure to work with and supervise some of the profession's finest police officers in my 16-year career. Stay safe, brothers and sisters.

## Acknowledgements

I am forever indebted to my dissertation committee, including my chair, Dr. Crystal Neumann, and those who served as committee members, Dr. Erick Aguilar and Dr. Jeff Roach. Your patience, quick responses, and valuable feedback have been crucial to my success in this most challenging of academic journeys. I also owe a special thanks to Dr. Gordon Vessels, who assisted me with tweaking my proposal and research methods to successfully navigate the IRB process.

I would also like to acknowledge the human resources staff who assisted me with data collection at the study site. This process required considerable time and effort on their part to provide me with data critical to my study. They performed these tasks in a timely manner and with a positive, supporting attitude.

## Table of Contents

List of Tables .....	x
List of Figures .....	xi
Chapter 1: Introduction .....	12
Background of the Study .....	13
Statement of the Problem .....	15
Purpose of the Study .....	16
Significance of the Study .....	17
Research Questions and Hypotheses .....	18
Theoretical Framework .....	20
Definitions of Terms .....	20
Assumptions .....	22
Scope and Delimitations .....	22
Limitations .....	23
Chapter Summary .....	24
Chapter 2: Literature Review .....	25
Literature Search Strategy .....	26
Theoretical Framework .....	27
History of Education and Policing in the United States .....	30
Police Education, Attitudes, and Performance .....	33
Appraising Performance in Law Enforcement .....	52
Chapter Summary .....	54

Chapter 3: Research Method .....	56
Research Questions and Hypotheses .....	57
Design of the Study .....	58
Design Appropriateness .....	59
Population and Sample Selection .....	60
Data Collection Procedures .....	62
Instrumentation .....	64
Data Analysis .....	66
Reliability and Validity .....	68
Ethical Procedures .....	71
Chapter Summary .....	73
Chapter 4: Results .....	74
Data Collection .....	74
Data Analysis and Results .....	76
Chapter Summary .....	82
Chapter 5: Discussion, Conclusions, and Recommendations .....	83
Findings, Interpretations, and Conclusions .....	85
Limitations of the Study .....	90
Recommendations .....	91
Implications for Leadership .....	94
Chapter Summary .....	95
References .....	96



Appendix A: Supervisory Evaluation .....	104
Appendix B: Supervisory Evaluation Scoring Guide .....	107
Appendix C: Informed Consent Document .....	110

## List of Tables

### Table

1. Educational Attainment of Police Officers Versus General Population (United States) .....	14
2. Supervisory Evaluation Performance Categories and Related Subcategories .....	65
3. Selection of Final Police Officer Sample .....	76
4. Educational Attainment of Police Officers in Research Sample .....	77
5. Educational Attainment in Sample Compared to U.S. Worker Data .....	77
6. Descriptive Statistics for Skill Category Scores in Sample .....	78
7. Correlations Between Degree Possession and Skill Category Scores .....	81

## List of Figures

## Figure

1. Center-out view of andragogy's relationship with policing ..... 28
2. Visual depiction of point-biserial correlation analysis ..... 67

## Chapter 1: Introduction

Law enforcement executives and scholars have recognized the advanced skills and knowledge needed to deal with the responsibilities and challenges in modern policing in the United States (President's Task Force on 21st Century Policing [President's Task Force], 2015). These responsibilities and challenges require police officers to receive higher levels of training and education (President's Task Force, 2015). Postsecondary education provides benefits, such as improved interpersonal communication skills, required to meet modern policing responsibilities (McElvain & Kposowa, 2008). The public could reasonably expect postsecondary education requirements for police officers in the United States will become standard in the 21st century. With the exception of Minnesota, no state-wide requirements exist for police officers to possess any type of postsecondary education degree (Hilal, Densley, & Zhao, 2013).

Scholars have produced a large body of research designed to determine what relationship, if any, exists between police officer education and performance in the United States. As elaborated in Chapter 2, this research has produced mixed results about the existence of this relationship. Law enforcement executives turning to the literature for guidance when establishing educational hiring criteria have not received clear and compelling justification for including postsecondary education requirements. The geographic and demographic diversity of the United States extends to its law enforcement agencies, prompting repeated suggestions among scholars for additional research in new settings (Loftus & Price, 2016; Shjarback & White, 2016). This study aimed to contribute to the body of knowledge about the connection between police officer education and performance by extending this research to a new geographic setting.

Chapter 1 introduces this quantitative correlational study. The background of the study provides the research context, including a brief review of literature relating police officer education and performance. This chapter includes the study's research questions, hypotheses, theoretical framework, definition of terms, assumptions, limitations, delimitations, and significance to provide further information about the study's methods and the place it occupies within the body of literature.

### **Background of the Study**

Law enforcement leaders and scholars have studied police officer education in the United States from the turn of the 20th century to 2017. Throughout different periods of professional reform and because of scholarly studies, law enforcement professionals, government officials, and scholars have repeatedly suggested police officers would benefit from postsecondary education if mandated by law enforcement agencies (Paoline, Terrill, & Rossler, 2014). Despite these recommendations, the profession has largely failed to implement widespread postsecondary education requirements (Paoline et al., 2014).

The resistance by law enforcement agencies to implementing postsecondary education requirements may be attributed to the mixed results found in the literature. Law enforcement executives turning to the literature for guidance when establishing educational hiring criteria have not received clear and compelling evidence of a connection between postsecondary education and police officer performance. Scholars have conducted numerous studies about this connection using a variety of performance measures: occupational attitudes (Paoline et al., 2014; Terrill & Paoline, 2013), police academy performance (Henson, Reyns, Klahm, & Frank, 2010; White, 2008), the use of force (Shjarback & White, 2016; Willits & Nowacki, 2014), disciplinary actions (Henson et al., 2010; White & Kane, 2013), supervisory performance ratings (Smith &

Aamodt, 1997; Truxillo, Bennett, & Collins, 1998), and self-performance ratings (Carlan, 2007; Kakar, 1998). Many of these studies have shown significant correlations between education and performance (Shjarback & White, 2016; White & Kane, 2013) while others have not (Henson et al., 2010; Willits & Nowacki, 2014). For example, Aamodt and Flink's (2001) correlation study of academy performance found education level to be significantly correlated with performance measures ( $r = .34$ ), while White's (2008) multiple regression analysis of academy performance found college credits had no significant effect on performance measures ( $\beta = -.004$ ).

Table 1 shows educational attainment data from the Bureau of Labor Statistics (2016) for police officers and the general population of workers 25 years old and older in the United States.

Table 1

*Educational Attainment of Police Officers Versus General Population (United States)*

Degree	Police officers	General population
Associate's degree	16.3%	9.4%
Bachelor's degree	31.2%	22.5%
Master's degree	5.5%	9.7%

*Note.* Adapted from *Educational Attainment for Workers 25 Years and Older by Detailed Occupation*, by Bureau of Labor Statistics, 2016. Retrieved from [https://www.bls.gov/emp/ep\\_table\\_111.htm](https://www.bls.gov/emp/ep_table_111.htm)

The data revealed police officers in the United States generally attain higher levels of education through the bachelor's degree level when compared to the general population. Despite being more educated than the general population, police officers are expected to enter and remain in a profession where large disparities in pay exist (Bell, 2017). Police officers in the

busiest and most dangerous assignments are often paid the least due to the financial standing of municipal and county governments in high crime areas (Bell, 2017).

### **Statement of the Problem**

Law enforcement executives throughout the United States must make informed decisions about educational hiring criteria for police officers. The problem is there is minimal research-based consensus about the benefits of a postsecondary education degree as it relates to police officer job performance. A review of the literature, detailed in Chapter 2, showed a need for more studies examining the relationship between police officer education and performance in diverse geographic settings. Studies examining police officer education and various performance measures have revealed mixed or inconclusive results and have produced repeated suggestions for additional studies in different settings (Chapman, 2012; Paoline et al., 2014; Rossler & Terrill, 2012). Additional studies, including those more narrowly focused on how postsecondary education correlates with the most critical types of performance for police officers, may provide valuable guidance to law enforcement executives seeking to establish appropriate educational hiring criteria.

Most law enforcement agencies in the United States use supervisory performance ratings in the process of evaluating police officer performance (Gul & O'Connell, 2013). Despite the prevalence of supervisory evaluations, the literature revealed few studies (none post-2010) examining the relationship between police officer education and supervisory ratings of performance. As with studies using other performance measures, the limited research in this area has provided no clear answers with respect to relationships between police officer education and supervisory performance ratings (Henson et al., 2010; Smith & Aamodt, 1997; Truxillo et al., 1998).

A lack of understanding about the impact of education on police officer performance affects executives for all types of law enforcement agencies in the United States, including municipal agencies in the state of Tennessee. These executives must weigh the potential advantages of instituting postsecondary education requirements with the potential disadvantages. These disadvantages include difficulties in filling vacant positions due to a smaller applicant pool and increased salary requirements to remain competitive with the private sector (Carter, Sapp, & Stephens, as cited in Rydberg & Terrill, 2010). Increased education requirements may also result in the elimination of otherwise skilled candidates who may prove to be valuable members of an agency (Decker & Huckabee, 2002). Increasing educational requirements without increasing compensation, especially in high-crime jurisdictions, may exacerbate recruitment and retention challenges already faced by law enforcement executives (Bell, 2017). Recent recommendations for increased education and training requirements for police officers have been based on the increasingly diverse skillset required for police officers to deal with 21st-century policing issues (President's Task Force, 2015). If law enforcement executives are to implement widespread postsecondary education requirements, the advantages of doing so likely need to become more apparent via additional research.

### **Purpose of the Study**

The purpose of this quantitative correlational study was to determine the degree to which the possession of a postsecondary education degree was correlated with measures of police officer job performance. This measurement was accomplished by examining numerical supervisory evaluations and education data for a three-year period (2013–2015) in a medium-sized municipal law enforcement agency in the state of Tennessee. Data consisting of 206



annual personnel evaluations for 85 nonsupervisory police officers serving in a patrol capacity was gathered.

This study examined the relationship between police officer education and mean supervisory performance ratings. Postsecondary education level was the independent dichotomous (“Degree” or “No Degree”) variable of interest. There were four dependent variables: (a) general professionalism, (b) productivity, (c) technical knowledge, and (d) management skills. Data was sourced from secondary data sources located in public personnel files for the municipality under study. This study was designed to provide agency leaders at the study site with information about how hiring practices favoring the possession of college degrees were related to the performance of employees in the agency.

### **Significance of the Study**

This study was designed to be directly applicable to law enforcement leaders and practitioners. Law enforcement executives tasked with establishing educational hiring criteria at the study site may benefit from this study. These executives may gain insight into the potential impact of postsecondary education on police officer performance, including how hiring practices requiring college degrees may have impacted the performance of employees in the agency, influencing decisions related to hiring and promotion standards. The results also provided the basis for policy and research recommendations to law enforcement executives and other scholars wishing to more closely examine postsecondary education as a predictor of police officer performance in geographic locations beyond the study site. Failing to conduct such research may have left agency leaders uninformed when making future decisions about the value of strengthening or lessening hiring and promotion requirements for postsecondary education.

This study also aimed to contribute to the larger body of knowledge in criminal justice research dedicated to examining postsecondary education as a potential predictor of job performance in an additional geographic setting unique from previously existing studies. The results of this study helped to provide additional information and more narrowly focused data relating supervisory ratings of critical performance areas to police officer education. Police officer training and education remains a current problem to be addressed (President's Task Force, 2015), making the study relevant to modern policing.

In addition to focusing on police officer education and training, the President's Task Force on 21st Century Policing (2015) report emphasized building trust and legitimacy on both sides of the police–citizen relationship and incorporating policies and oversight reflective of community values. The President's Task Force recognized training and education policies to be critical components of hiring police officers who reflect the values and demographics of the communities they serve. This study addressed issues important in the modern policing climate.

### **Research Questions and Hypotheses**

This study's research questions were based on a theoretical framework where police officers with additional education demonstrate improved performance. To achieve the purpose of the study, the research questions for the quantitative study were as follows:

Research Question 1: What degree of correlation, if any, exists between the possession of a postsecondary education degree by police officers and supervisory ratings of professionalism?

Research Question 2: What degree of correlation, if any, exists between the possession of a postsecondary education degree by police officers and supervisory ratings of productivity?

Research Question 3: What degree of correlation, if any, exists between the possession of a postsecondary education degree by police officers and supervisory ratings of technical knowledge?

Research Question 4: What degree of correlation, if any, exists the possession of a postsecondary education degree by police officers and supervisory ratings of management skills?

The hypotheses for the study's research questions were as follows:

H1<sub>0</sub>: There is no significant correlation between the possession of a postsecondary education degree by police officers and supervisory ratings of professionalism.

H1<sub>a</sub>: There is a significant positive correlation between the possession of a postsecondary education degree by police officers and supervisory ratings of professionalism.

H2<sub>0</sub>: There is no significant correlation between the possession of a postsecondary education degree by police officers and supervisory ratings of productivity.

H2<sub>a</sub>: There is a significant positive correlation between the possession of a postsecondary education degree by police officers and supervisory ratings of productivity.

H3<sub>0</sub>: There is no significant correlation between the possession of a postsecondary education degree by police officers and supervisory ratings of technical knowledge.

H3<sub>a</sub>: There is a significant positive correlation between the possession of a postsecondary education degree by police officers and supervisory ratings of technical knowledge.

H4<sub>0</sub>: There is no significant correlation between the possession of a postsecondary education degree by police officers and supervisory ratings of management skills.

H4<sub>a</sub>: There is a significant positive correlation between the possession of a postsecondary education degree by police officers and supervisory ratings of management skills.

### **Theoretical Framework**

Knowles's (1984) research related to adult learning theory, or andragogy, revealed characteristics of adult learners unique from child learners: adults are self-directed learners; life experience is a resource for learning; readiness to learn is related to a social role; learning focus shifts from future application to being immediately applied to problems of practice; and the motivation to learn is internal. The profession of law enforcement requires police officers to function for long periods of time without external direction, use experience to make informed (and sometimes life-or-death) decisions, and generally navigate an increasingly complex set of daily challenges in the modern world (Christopher, 2015). The principles of andragogy support police officers, as adult learners, benefitting professionally from additional education (Knowles, 1984). Perry's (1999) theory of cognitive development also supports higher education as a means of preparing students for the decision-making skills and situational adaptability required of a police officer.

This study's research questions and hypotheses were based on a theoretical framework where education level is an independent variable upon which various performance measures, including supervisory performance evaluation measures, are dependent. Chapter 2 provides further evidence of policing's relationship with adult learning and cognitive development, including how major principles of andragogy and cognitive learning theory relate to police officer duties and characteristics. Chapter 2 also summarizes additional research existing within the same theoretical framework.

### **Definitions of Terms**

Definitions are provided for the study's independent and dependent variables. Further definitions of terms related to the supervisory performance evaluation instrument used in the

study are provided in Appendix B. Additional terms used in the study having multiple or ambiguous meanings are also included.

***General professionalism.*** Dependent variable. A police officer skillset representing “the attributes, commitments, values, and goals that characterize a profession” (Mahajan, Aruldas, Sharma, Badyal, & Singh, 2016, p. 157). Represented in the study’s supervisory evaluation instrument by the subcategories of dependability, cooperation and teamwork, positive attitude and enthusiasm, personal accountability, relationships with supervisors, relationships with peers, interpersonal skills, attitude about performance, flexibility, and adaptability (Appendix A).

***Management.*** Dependent variable. A police officer skillset representing the ability to control emotions, maintain integrity, take responsibility for personal performance, and adapt to change (Giorgi et al., 2016). Represented in the study’s supervisory evaluation instrument by the subcategories of judgement, common sense, following officer safety practices, work ethic, taking control of situations, emotional control, and time management (Appendix A).

***Medium-sized law enforcement agency.*** A government agency providing policing services to medium-sized cities with populations between 50,000 and 500,000 residents (International Association of Chiefs of Police, 2014).

***Postsecondary education.*** Independent variable. Education beyond the high school level (Kirkman, McNees, Stickl, Banner, & Hewitt, 2016). Measured in the study as the possession of a conferred degree at the level of an associate’s (2-year) degree or higher. Represented by a dichotomous variable (“Degree” or “No Degree”).

***Productivity.*** Dependent variable. A police officer skillset representing an expected level of activity designed to produce results such as reduced crime levels (Fagan & Geller, 2015). Represented in the study’s supervisory evaluation instrument by the subcategories of

initiative, work ethic, recognizing and avoiding unnecessary problems, aligning efforts with department goals, proactive enforcement, and punctuality (Appendix A).

***Technical knowledge.*** Dependent variable. A police officer skillset representing technical expertise, interpersonal effectiveness, and job knowledge (Kell, Motowidlo, Martin, Stotts, & Moreno, 2014). Represented in the study's supervisory evaluation instrument by the subcategories of technical skills, knowledge of organizational policies, situational adaptability, and relating to others (Appendix A).

### **Assumptions**

This study involved the collection of supervisory performance evaluations for police officers at the study site. These evaluations were completed by the police officers' direct supervisors (patrol sergeants). It was assumed the supervisors completing the evaluation were the people most suitable to provide an honest and accurate evaluation of the police officer's performance for the evaluation year. This assumption was necessary as no alternate performance measures using the same criteria as the supervisory performance evaluations existed for analysis.

The study relied on educational data in the form of official transcripts provided by police officers to human resources officials at the study site. It was assumed all police officers in the research sample provided timely copies of postsecondary degree transcripts to human resources personnel. The presence of these transcripts in human resources files provided the data for the independent dichotomous education variable in the study. This assumption was necessary as no alternate publicly available education data for the research sample existed for analysis.

### **Scope and Delimitations**

This study focused on one medium-sized law enforcement agency in the state of Tennessee. The sample consisted of 85 police officers employed in a nonsupervisory patrol

capacity. The lack of standardization of supervisory evaluation instruments across multiple law enforcement agencies in Tennessee required restricting the focus of the study to one agency. The scope of the study likely limited the generalizability of the findings to other law enforcement agencies beyond the study site.

The study covered the three-year period of 2013–2015. A longer time period was not selected due to time constraints associated with data collection. A more recent time period was not selected due to changes to the supervisory evaluation instrument at the study site for the year 2016.

### **Limitations**

This study focused on supervisory performance evaluations as a measure of police officer performance. This process was the only method of employee appraisal conducted at the study site during the three-year period of 2013–2015. A 360-degree appraisal approach including peer appraisals and self-appraisals may provide a more valid measure of police officer performance, though research in this area remains inconclusive (Gul & O’Connell, 2013). A three-year period was selected to include appraisals of the same police officers from different supervisors to help mitigate any potential supervisory rater bias.

The study focused on education level as the sole independent variable. Confounding variables having the potential to impact police officer performance within the research sample may have existed. Examples of other demographic variables having a potential impact on police officer performance include age, years of service, and military service (Chapman, 2012; White & Kane, 2013). The research sample was diverse in these categories and police officers of all demographics in the study’s agency had equal opportunity to pursue additional education via a municipal tuition reimbursement programs.

## **Chapter Summary**

Chapter 1 provided an introduction and overview of the study. The purpose of this quantitative correlational study was to determine the degree to which the possession of a postsecondary education degree was correlated with measures of police officer job performance. This measurement was accomplished by examining numerical supervisory evaluations and education data for a three-year period (2013–2015) in a medium-sized municipal law enforcement agency in the state of Tennessee. The problem addressed was there is minimal research-based consensus about the benefits of a postsecondary education degree as it relates to police job performance, leaving police executives with little guidance when establishing educational hiring criteria.

Chapter 1 introduced the study's research questions and hypotheses, the theoretical framework upon which these questions and hypotheses were framed, and the methodology used to address these questions and hypotheses. Chapter 1 also provided a summary of the study's definitions, assumptions, scope, delimitations, and limitations. The significance of the study was summarized, including how the study contributes to the existing body of knowledge relating police officer education to performance. Chapter 1 provided a brief background of the literature relevant to the study. Chapter 2 presents a thorough review of the literature related to the history of police officer education in the United States, the relationship between police officer education and various measures of performance, and police officer performance appraisal methods.



## Chapter 2: Literature Review

Law enforcement executives throughout the United States must make informed decisions when establishing educational hiring criteria for police officers. The problem is there is minimal research-based consensus about the benefits of a postsecondary education degree as it relates to police job performance, leaving police executives with little guidance when establishing these hiring criteria (Hilal et al., 2013). The purpose of this quantitative correlational study was to determine the degree to which the possession of a postsecondary education degree was correlated with measures of police officer job performance. Job performance was measured by performance scores contained in supervisory performance evaluations. The study focused on a medium-sized municipal law enforcement agency in the state of Tennessee.

This literature review chapter had five objectives. The first goal was to examine the history of education and policing in the United States to provide a historical context for the study. The second goal was to identify measures of police officer performance previously studied with respect to their relationship with education. The third goal was to identify gaps in the body of knowledge about the relationship between police officer education and performance, demonstrating a need for further investigation. The fourth objective was to examine how police officer performance is generally appraised and how previous studies have examined the specific relationship between postsecondary education and supervisory performance evaluations. The fifth goal was to further explain the conceptual/theoretical framework guiding the study.

The review of studies examining police officer education and performance was organized by several performance measures: occupational attitudes, police academy performance, the use of force, disciplinary actions, supervisory ratings of performance, and self-ratings of performance. Because the study's research questions addressed supervisory performance

evaluations, a discussion of how performance is generally measured in law enforcement agencies is also included. This review summarizes the major themes found in the literature and includes an exploration about gaps in the literature the study helps to fill.

A review of the literature related to the history of police officer education requirements in the United States from 1900 to 2017 generally revealed repeated suggestions for higher education followed by a lack of widespread implementation of these suggestions (Paoline et al., 2014). A review of the literature examining police officer education and its relationship with various performance measures revealed mixed or inconclusive results along with repeated suggestions for additional studies in different settings (Chapman, 2012; Paoline et al., 2014; Rossler & Terrill, 2012), supporting the purpose of this study.

### **Literature Search Strategy**

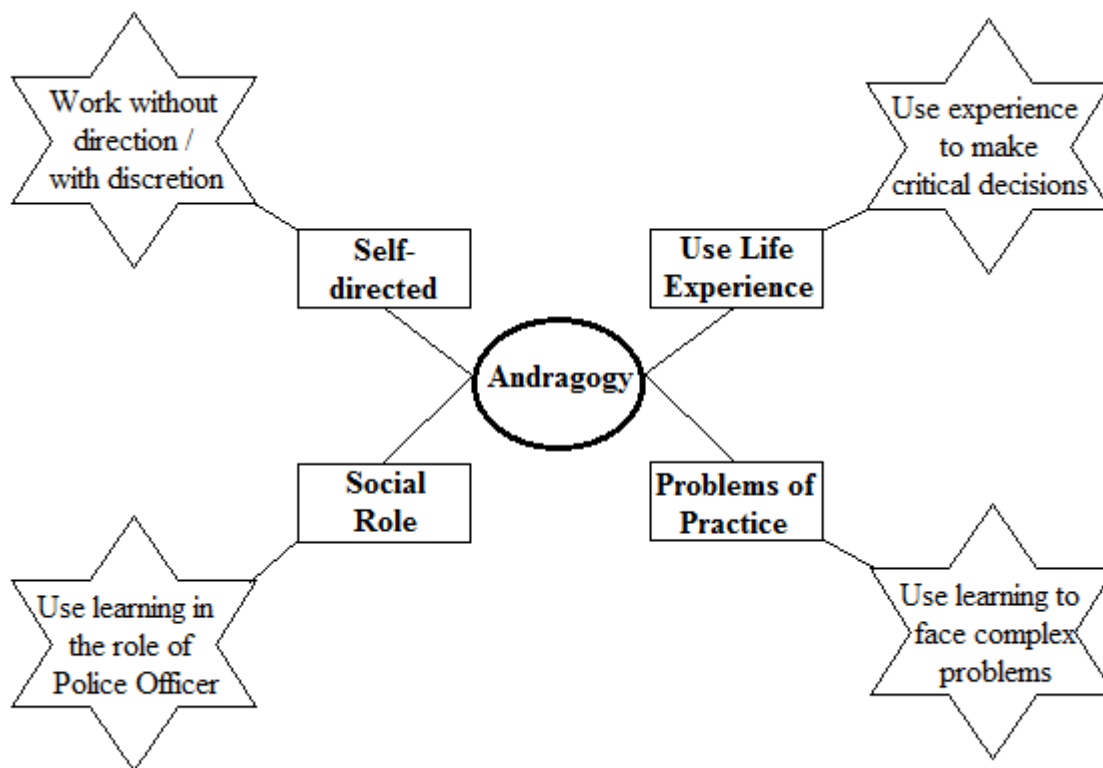
The literature search focused on two major goals: reviewing the history of police education in the United States and identifying previous studies about the relationship between police education, attitudes, and performance. The researcher conducted a literature search using electronic university library databases from American College of Education and Middle Tennessee State University, and an Internet search of scholarly literature using Google Scholar. Full-text electronic copies of peer-reviewed studies were retrieved from these databases. In one case, the researcher contacted the author of a peer-reviewed study identified in the literature search by e-mail to obtain an electronic copy of an article due to the unavailability of the full-text copy online. Additional online resources used in the study include Lexis Nexis Legal Resources used to cite Tennessee state statutes, Justia's United States Supreme Court Center used to cite relevant Supreme Court cases, and the U.S. Government Publishing Office used for relevant government reports. The researcher's personal library was used for hard copy book resources.

The following key words and phrases were used in the literature search: *law enforcement, law enforcement officer, police officer, education and academy performance, education and attitude, education and disciplinary actions, education and discipline, education and performance, education and performance ratings, education and self-ratings of performance, education and supervisory performance evaluations, education and supervisory performance ratings, education and use of force, education requirements, occupational attitude, performance evaluations, postsecondary education, supervisory performance evaluations, andragogy, college education, discipline, education, education and training, education history, performance appraisal, professionalism, university education, and use of force.*

## **Theoretical Framework**

### **Andragogy**

Knowles's (1984) theory of andragogy detailed the characteristics of adult learners unique from child learners: adults are self-directed learners, life experience is a resource for learning, readiness to learn is related to a social role, learning focus shifts from future application to being immediately applied to problems of practice, and the motivation to learn is internal. The profession of law enforcement requires police officers to function for long periods of time without external direction, use experience to make informed (and sometimes life-or-death) decisions, and generally navigate an increasingly complex set of daily challenges in the modern world (Christopher, 2015). Figure 1 provides a visual representation of how major principles of andragogy relate to police officer duties and characteristics.



*Figure 1.* Center-out view of andragogy's relationship with policing. Four major principles of andragogy lead to police officer roles and responsibilities.

The principles of andragogy support police officers, as adult learners, benefitting professionally from additional education (Knowles, 1984). Birzer (2003) supported this assertion by pointing out police trainers can effectively incorporate andragogical principles into police training by emphasizing

The skills of analysis and decision making through a series of job-related cases or problems . . . [and establishing] a learning approach rather than a teaching approach by a series of planned, structured activities enabling the learner to acquire the appropriate knowledge. (p. 38)

This study exists within a theoretical framework where education level is an independent variable upon which various performance measures, including supervisory performance evaluation measures, are dependent.

### **Cognitive Development**

Perry (1999) developed a theory of cognitive development based on the principle of students progressing through four stages of intellectual development while receiving an undergraduate education. These four stages are dualism, multiplicity, relativism, and commitment. The dualism stage begins with believing all problems are solvable and students must learn the correct solutions from those in positions of authority. Multiplicity reveals conflicting answers to life's issues, leading to the recognition of solvable and unsolvable problems, the existence of conflicting solutions, and more of a reliance on inner voices rather than authority figures. Relativism reveals problems must be considered in context and the solutions to these problems must be supported by sound reasoning, leading to the student's recognition of the importance of making choices and remaining committed to a decision. Finally, the commitment stage sees the student fully integrating knowledge learned from external sources and knowledge coming from personal experience.

Perry's (1999) final stage of cognitive development, commitment, also involves an exploration of the implications of decision making and the responsibility associated with the need to constantly evolve with changing conditions. The end stage cognitive development of students in Perry's theory appears to be ideal for preparing a person for the challenges of modern policing. Several skills in the supervisory performance evaluation (Appendix A) were designed to measure the degree to which the police officer made sound decisions and remained adaptable in the face of changing conditions, including the categories of flexibility/adaptability, situational

adaptability, relating to others, and judgment/common sense. Perry's cognitive development theory provides further support for the study's support of postsecondary education as a positive influence on the development of skills critical in modern policing.

### **History of Education and Policing in the United States**

The history of police education and professionalization in the United States extends back to the law enforcement professional reform movement in the early part of the 20th century (Paoline et al., 2014). Berkeley, California, Police Chief August Vollmer was a leader in this movement and one of the first major proponents for formal education for police officers (Paoline et al., 2014). Vollmer's goal to see a more educated workforce initially arose out of a desire to see more expertly trained officers use scientific principles to help solve cases (Oliver, 2016). Vollmer brought new technology to policing, including the development of more advanced polygraph (lie detector) machines (Oliver, 2016). Vollmer also introduced innovative training ideas to policing, including implementing educational programs for police officers making use of local university professors who were experts in a variety of related fields (Oliver, 2016). These training innovations eventually led to the creation of one of the first police training academies in the area in 1908 (Oliver, 2016). Vollmer's ideas on the importance of formal postsecondary education for police officers separate from standard training practices eventually lead to the creation of a Criminology program at the University of California where police officers could obtain a four-year degree (Oliver, 2016). This development sparked the rise of other similar programs throughout the country in the following decades (Oliver, 2016).

Though Vollmer was successful in creating and implementing new educational programs, this advocacy for educating police officers beyond the high school level was largely ignored throughout most of the United States until the late 1960s (Paoline et al., 2014). Reform

movements in the late 1960s and into the 1970s again began to emphasize higher education for police officers to achieve professionalization in the field of law enforcement (Hawley, 1998). Green and Gates (2014) defined professionalization as “the transformation of an occupation into a profession” (p. 75).

Green and Gates (2014) argued among the defining characteristics of a profession are discipline knowledge, intellectual activity, a commitment to learning, and national educational standards. These characteristics mean professionals should have a level of education above the level of the community. Green and Gates pointed out while possessing a high school diploma once met this standard, by the second half of the 20th century this standard began to no longer apply. The educational requirements of many law enforcement agencies had failed to keep up with the constantly changing demands of policing as a profession (Green & Gates, 2014).

The 1960s in the United States saw a significant increase in national crime rates and instances of widespread civil disobedience and rioting in larger cities; this increase led to an enhanced government interest in crime prevention (Roberg & Bonn, 2004). The President’s Commission on Law Enforcement and Administration of Justice (1967) suggested college-educated police officers were best able to handle the increasingly complex societal problems of the time and recommended all officers should have four-year degrees. The Omnibus Crime Control and Safe Streets Act of 1968 led to the development of the Law Enforcement Education Program (LEEP). The goal of LEEP was to increase educational standards for police officers and to provide financial aid to officers wishing to further their education (Roberg & Bonn, 2004). These advances continued into the 1970s with the release of the National Advisory Commission on Criminal Justice Standards and Goals (1973) *Report on Police*. The report included a timetable requiring all police officers to eventually have a four-year degree by 1982.

Following the events and recommendations of the 1960s and 1970s, a large increase in postsecondary education programs designed for police officers began in the United States (Roberg & Bonn, 2004). Law enforcement executives and national figures in education began to raise significant questions about the academic quality of many programs created in the rush to obtain federal funding, concluding many criminal justice programs lacked a scholarly focus (Cordner, 2016). LEEP eventually ceased to exist and education in law enforcement returned to the status quo, resulting in few postsecondary education requirements and almost nonexistent four-year degree requirements for police officers into the 21st century (Roberg & Bonn, 2004). While programs like LEEP did not result in the widespread adoption of four-year degree requirements in law enforcement agencies, these programs did encourage many scholars to conduct significant research about the benefits of higher education in law enforcement (Paoline et al., 2014).

The federal government's latest significant examination of law enforcement as a profession came from the President's Task Force on 21st Century Policing's final report in 2015. President Obama formed the task force with the intention of "identifying best practices and offering recommendations on how policing practices can promote effective crime reduction while building public trust" (President's Task Force, 2015, p. 1). The report contained six main pillars, including police officer training and education. Recognizing modern police officers face challenges such as increased international terrorism, rapidly changing technology, a larger immigrant population, constantly changing laws, cultural revolutions, and a growing mental health crisis, the task force suggested higher education should be encouraged and incentivized at all levels of government. While the task force recognized the value of hiring a diverse group of police officers, including those without a college degree, the report recommended police officers



should receive opportunities to complete postsecondary education during their careers with government financial assistance.

Reviewing the history of police officer education from the turn of the 20th century to the present revealed two major themes. First, it has been periodically recommended police officers would benefit from postsecondary education. Second, the profession has largely failed to implement these recommendations (Paoline et al., 2014). The law enforcement agency examined in this study implemented some of these suggestions, including incentivizing postsecondary education in the hiring and promotion processes as well as providing tuition reimbursement through the master's degree level. However, the agency followed the guidelines provided by Tennessee Code Annotated (T.C.A. § 38-8-106, 2015) and did not mandate a postsecondary degree as eligibility for employment.

### **Police Education, Attitudes, and Performance**

A review of the literature related to a police officer's education and their attitudes about their profession or their performance yielded mixed and inconclusive results using a diverse set of attitude and performance measures. For example, some studies indicated there is no relationship between education and how often police officers generate citizen complaints potentially leading to disciplinary actions (Bruns & Bruns, 2014). Other studies, such as Cunningham's (2003) examination of state-wide disciplinary actions in Florida, discovered higher educated police officers to be significantly less likely to be subject to discipline. Many studies yielded mixed results using multiple dependent performance variables (Rossler & Terrill, 2012; Rydberg & Terrill, 2010). A review of the literature related to education and occupational attitudes, education and police academy performance, education and the use of force, education and disciplinary actions, education and supervisory performance ratings, and education and self-

performance ratings follows. Most studies found in the literature review contained research questions addressing education's potential correlation with police officer attitudes and performance, consistent with the present study.

### **Education and Occupational Attitudes**

Occupational attitudes in law enforcement refer to police officers' attitudes towards critical aspects in policing, including roles, practices, and relationships with citizens (Sun & Chu, 2008). Occupational attitudes also include motivational factors for police officers who pursue postsecondary education either prior to or during employment (Hilal & Densley, 2013) and attitudes of law enforcement executives about the value of postsecondary education in the profession (Gardiner, 2015). A review of the literature revealed many studies examining the relationship between education and occupational attitudes of police officers in the United States and mixed results about education's impact on those attitudes (Chapman, 2012; Gau, Terrill, & Paoline, 2013; Paoline et al., 2014; Telep, 2010).

While the United States was the primary geographical focus for this portion of the literature review, studies exclusively examining perspectives in the state of Minnesota are included separately due to the state's unique status of having the only state-wide postsecondary education requirement for police officers in the United States (Hilal et al., 2013). This section also includes a selection of literature examining police occupational attitudes in other countries for comparison. Police officer attitude is a skill measured in multiple categories on the supervisory performance evaluation used by the agency of interest in the present study (Appendices A & B), making a review of literature examining the relationship between police officer education and the occupational attitudes appropriate.

**Police occupational attitudes in the United States.** This study's geographical focus is the United States and, specifically, the state of Tennessee. The research questions address whether higher levels of education were correlated with police officer attitudes toward a variety of aspects of the law enforcement profession. Scores in the supervisory performance evaluation used in the study in multiple categories (Appendices A & B) have the potential to reflect negative attitudes as defined by the variables in the literature.

The literature revealed the education of police officers in the United States had mixed effects on their occupational attitudes toward the abuse of authority (Telep, 2010), the use of force (Chapman, 2012), promotional aspirations (Gau et al., 2013), responding to citizen requests (Rossler & Terrill, 2012), job satisfaction, views of upper-level management, and role orientation (Paoline et al., 2014). Police officers and law enforcement executives also had mixed attitudes about the value of postsecondary education in the profession, despite the prevalence of educational incentives for police officers in some agencies (Gardiner, 2015; Hilal & Densley, 2013).

Marginal support for education as a predictor of police officer occupational attitudes came from an examination of how the possession of various levels of postsecondary degrees and when police officers obtained these degrees impacts attitudes about the abuse of authority (Telep, 2010). Telep tested two hypotheses. First, police officers with postsecondary education would be less likely to support the overextension of police authority, maintaining silence when abuse of authority is witnessed, breaking rules, and minimalizing the concern of outsiders about issues of police brutality. Second, the possession of a four-year degree would have the maximum impact on these attitudes. The data revealed police officers with a postsecondary degree held attitudes

marginally less supportive of abuse of authority regardless of when the police officer received the degree and across varying levels of higher education.

Stronger evidence of a link between education and occupational attitudes came from Gau et al.'s (2013) examination of promotional aspirations and what factors affected a police officer's desire to ascend through the ranks of their department. A survey of 2,100 police officers from multiple jurisdictions and geographic regions revealed two significant correlations. First, police officers with higher education exhibited significantly greater promotion valence, or how much value police officers place in upward mobility within their agencies. Second, police officers with higher education had significantly higher expectations about their desired rank at retirement.

Responding to citizen requests for service is a common task for police officers in any agency, including the agency under examination in the present study. Rossler and Terrill (2012) studied the responses of police officers to noncoercive citizen requests for service during police–citizen encounters, seeking to determine the frequency of citizen requests, how police fulfill these requests, what situational and officer-based characteristics may serve as predictors for officer responsiveness, and what factors may predict a police officer's willingness to comply with such requests. Education provided only one statistically significant correlation within the study: officers with four-year degrees or more were less likely to provide an explanation for denying a citizen request for service.

Other studies have failed to show any support for education as a predictor of police officer occupational attitudes. Education had no predictive value for police officer attitudes about the use of force in minority communities in New Jersey (Chapman, 2012). Paoline et al. (2014) examined the impact of varying levels of education and degree major on the attitudes of police officers towards job satisfaction, views of upper-level management, and role orientation;

role orientation included the subcategories of law enforcement, order maintenance, and community policing. Education level had no effect or a negative effect on outlook. Paoline et al. found a negative correlation between higher education and both job satisfaction and views of management while no significant relationship existed between education and occupational role orientations. Degree major also had no significant effect on any of the dependent variables except for business majors having a more favorable view of management than criminal justice majors.

Loftus and Price (2016) hypothesized police officers in law enforcement agencies requiring a bachelor's degree as a condition for employment and police officers possessing a bachelor's degree would exhibit enhanced attitudes about police professionalism. Surveys of police officers in two Texas law enforcement agencies (one with a bachelor's degree requirement and one without) revealed no relationship between possessing a bachelor's degree and increased professional attitudes towards policing (Loftus & Price, 2016).

Occupational attitudes in law enforcement about the value of education can be studied by examining how the population of police officers are educated when compared with other U.S. citizens and why a disparity, if any, exists. Police officers have generally more formal education than other citizens of the United States despite there being few widespread college degree requirements in the profession (Hilal & Densley, 2013). Data from the Bureau of Labor Statistics (2016) revealed approximately 16.3% of police officers in the United States have associate's degrees, 31.2% have bachelor's degrees, and 5.5% have master's degrees. These figures are higher than the comparable totals for all populations of 9.4%, 22.5%, and 9.7%. Police officers who elect to pursue postsecondary education either before or during employment may have many motivations for doing so (Hilal & Densley, 2013).

Nearly half of the respondents to Hilal and Densley's (2013) study reported career advancement as a motivating factor for pursuing postsecondary education while 21% also reported personal fulfillment. Agency support for college education was also significant, with 56% of officers reporting their agencies provide tuition reimbursement and 23% reporting their departments will adjust shift schedules to facilitate class attendance. Gardiner (2015) found similar results in California, where 93% of law enforcement agencies offer some type of incentive for higher education, including increased pay, tuition reimbursement, and flexible scheduling. Despite the prevalence of these incentives, California law enforcement executives could only generally agree on one perceived benefit to postsecondary education: improved report writing skills. The present study's agency offers tuition reimbursement incentives but has historically not supported changing shift schedules for education. Nevertheless, many police officers in the agency have used the tuition reimbursement benefits despite scheduling rigidity, likely because of the widespread current availability of flexible online degree program offerings.

**Police occupational attitudes in Minnesota.** Unlike this study's setting of Tennessee, Minnesota has the distinction of having the only state-wide postsecondary education requirement for police officers in the United States (Hilal et al., 2013). Minnesota police officers must possess a two-year associate's degree to be certified (Hilal et al., 2013). Hilal and Erickson's (2010) data revealed Minnesota officers were more educated than the general population of the state, but only 30.8% of respondents felt a four-year degree was an appropriate requirement for entry into law enforcement. Respondents generally felt higher ranks should have increased educational requirements. Hilal et al. (2013) further studied these data, finding 30% of Minnesota officers would support a four-year degree requirement for entry into law enforcement and 70% of officers would have still entered the profession with a four-year degree requirement.

A minimum education requirement beyond a high school diploma is realistic for other states given the success of the Minnesota model in increasing educational standards for Minnesota's officers (Hilal & Erickson, 2010). There is value in conducting similar studies in other states to determine if the state's unique requirements influenced the increased education levels in Minnesota or if these education levels are reflective of a national trend (Hilal & Erickson, 2010). No comparable studies examining police officer attitudes about educational requirements in the state of Tennessee were found during the literature review.

T.C.A. establishes no state-wide education requirements comparable to Minnesota (T.C.A. § 38-8-106, 2015). This study's agency of interest has generally included a preference for the possession of an associate's degree or higher on police officer job postings. The data collection process was designed to reveal if the education level demographics of the Tennessee agency of interest are similar to Minnesota agencies. While this study did not directly examine police officer attitudes, some insight into supervisory attitudes towards police officers with varying levels of education was gained. Recommendations to city and state officials about implementing similar education requirements in Tennessee as Minnesota are provided in Chapter 5.

**International police occupational attitudes.** While this study's geographic focus lies within the United States, many police officer roles are common across national borders including order maintenance, crime prevention, involving citizenry in the policing process by developing police-community relationships (community policing), and aiding citizens in need (Cuvelier, Jia, & Jin, 2015). The study's research questions addressed a potential relationship between education and positive police officer attitudes about these roles in the United States. As with

other measures of performance, the literature search revealed mixed results with respect to international occupational attitudes.

International attitudes on education in Western-style representative democracies like the United States such as Australia (Jones, Jones, & Prenzler, 2005) and India (Scott, Evans, & Verma, 2009) were not found to be supportive of education as a predictor of job attitudes. Jones et al. (2005) examined the relationship of postsecondary education with police turnover and job attitudes in Australia. Jones et al. wished to test the position where higher education reduces police commitment to the job due to frustrated employment aspirations and increased employment opportunities outside of law enforcement. No significant correlation between education and turnover existed within the data, either generally or at the five-year mark. Job attitudes between degree holders and non-degree holders generally did not differ. Scott et al. (2009) surveyed police officers in India about their perceived responsibilities, finding higher education among Indian police tended to make officers more cynical about public service, more demanding of responsibility and support from management, and generally less idealistic in their attitudes. Despite the lack of many statistically significant relationships involving education, the hiring of a more highly educated police force in India may be a catalyst for change as educated officers question current police administrative policies (Scott et al., 2009).

The nondemocratic People's Republic of China offered contradictory results when compared to more traditional Western-style democracies, generally linking increased education to improved attitudes about more modern aspects of policing (Cuvelier et al., 2015). No significant correlation existed in the data between attitudes about education and more traditional police roles such as order maintenance (Cuvelier et al., 2015). Chinese cadets who placed more value on formal education and training were more likely to embrace modern police roles such as



proactive patrol and community policing emphasized in their postsecondary curriculum (Cuvelier et al., 2015). Community policing, or implementing programs designed to involve the community and build police–community relationships and trust, is also a prominent feature of effective policing in the United States (President’s Task Force, 2015).

### **Education and Police Academy Performance**

Training police officers in the United States typically begins with attendance at a police academy designed to produce an officer ready to meet the demands of modern policing (Makin, 2016). T.C.A. states all police officers in Tennessee wishing to become certified must attend a state-approved recruit training academy within six months of their date of employment (T.C.A. § 38-8-107, 2017). Though this study’s research questions did not specifically address academy training, the development of many of the skills measured in the supervisory performance evaluation at the study site (Appendices A & B) begins with the police academy. The research questions did not draw a distinction between phases of a police officer’s career, supporting a potential relationship between education and academy performance. This connection makes a review of literature examining the relationship between police officer education and police academy performance appropriate.

Aamodt and Flink (2001) found support for education as a predictor of police academy performance after examining the relationship between police cadet education and police academy written test scores at a regional police training academy in Virginia. Performance was studied by collecting average scores for the 20 tests taken by cadets during their time at the academy, standardized across 10 academy classes. A significant positive correlation existed between education and test performance. Cadets with a bachelor’s degree did not outperform

cadets with an associate's degree, perhaps suggesting education beyond a two-year degree produces diminishing results.

Other studies showed no predictive value for education with regard to police academy performance. White (2008) examined success using a similar methodology to Aamodt and Flink (2001), taking average scores for academy exams, including a comprehensive final exam, in a large metropolitan police academy. College education offered no predictive value for performance in the academy. Education also had no significant relationship with either written or physical exam scores for cadets in the Cincinnati police academy (Henson et al., 2010).

The present study's agency of interest did not collect data related to the performance of its police officers at the training academy, making a data analysis similar to those studies examining education and police academy performance not possible. As police officers in this agency were expected to build upon the skills learned in the training academy throughout their careers, the lack of a clear relationship between education and academy performance is relevant to the study's recommendations about requiring postsecondary education for hiring.

### **Education and the Use of Force**

The job of police officer is sometimes confrontational by its nature, requiring the use of force to carry out necessary duties. The use of force, including deadly force, has the potential to be controversial and fall under great public scrutiny (Koper, 2016). The use of force by police officers is permitted while maintaining order and enforcing laws within limitations established by the United States Supreme Court and the written policies of law enforcement agencies (Terrill & Paoline, 2013). *Graham v. Connor* (1989) states the use of force during an arrest is required to be "objectively reasonable in view of all the facts and circumstances of each particular case." Law enforcement agency policies further define objective reasonableness; over 80% of such

policies in law enforcement agencies in the United States incorporate a use of force continuum designed to establish parameters for the use of force by levels of severity (Terrill & Paoline, 2013).

The law enforcement agency of interest in this study used a continuum-based use of force policy with force levels ranging from the mere presence of a police officer to the use of deadly force (e.g., a firearm). The study's research questions addressed whether higher levels of education were correlated with police officer discretion and attitudes about the appropriate use of force. The ability to follow department policies and assert appropriate authority while avoiding unnecessary confrontations and respecting the rights of citizens were skills measured in the supervisory performance evaluation at the study site (Appendices A & B). Because of these commonalities, a review of literature examining the relationship between police officer education and the use of force is appropriate. Unlike the mixed results found using other performance measures, the literature generally revealed a positive relationship between police officer education and a reduction in the use of some types of force (Chapman, 2012; McElvain & Kposowa, 2008; Paoline & Terrill, 2007; Rydberg & Terrill, 2010; Shjarback & White, 2016). Only one recent study revealed no significant relationship in this area (Willits & Nowacki, 2014).

Paoline and Terrill (2007) found evidence of a relationship between education and the use of force while studying encounters between police officers and suspects in Indianapolis, Indiana and St. Petersburg, Florida, differentiating between verbal force and physical force. Police officers with any level of postsecondary education were significantly less likely to use verbal force while only officers with a four-year degree were significantly less likely to use physical force. Paoline and Terrill suggested law enforcement agencies should consider

requiring college education or specifically a four-year degree for police officers. Education proved to have a statistically significant relationship with shootings in one California sheriff's department, as officers with higher education were much less likely to shoot than their high school educated counterparts (McElvain & Kposowa, 2008). This result may be due to improved interpersonal communication skills associated with postsecondary education and the use of these skills to deescalate a potentially lethal encounter (McElvain & Kposowa, 2008).

Rydberg and Terrill (2010) found further support for education as a force reducer while examining the effects of higher education on the behavior of police officers in two medium-sized cities, focusing on three distinct decision-making areas: arrests, searches, and seizures. Field workers (university students) gathered observational data during training rides with police officers, taking notes on officer–citizen interactions. No correlation existed between higher education and the probability of an arrest or search during a police–citizen encounter, but college education significantly reduced the likelihood of force being used. Further research is needed in this area due to the unresolved nature of the relationship between police officer education and behavior (Rydberg & Terrill, 2010), supporting the present study's purpose. Education and the use of force were also significantly correlated in a study of New Jersey minority communities; higher educated patrol officers generally used less force (Chapman, 2012).

Studies focusing on a national scale also generally supported education having a positive influence on the use of excessive force and force-related complaints. Agencies mandating associate's degrees for police officers are significantly less likely to receive complaints about the excessive use of force and experience fewer assaults on police officers (Shjarback & White, 2016). After examining national data, Stickle (2016) observed law enforcement agencies combining requirements for strict preemployment screening standards, advanced training, and

postsecondary education field fewer complaints against police officers related to the use of force. The exception to these findings came from Willits & Nowacki's (2014) examination of organizational factors in law enforcement agencies serving various large and small cities and their relationship with deadly force; requiring some postsecondary education was not a predictor of the use of deadly force.

Researchers have suggested conducting additional studies about police education and the use of force in different geographic locations and in communities with different demographics (Chapman, 2012; Shjarback & White, 2016). The present study examined the use of force of police officers in a different geographic setting from previous studies from the perspective of supervisory evaluators. Performance evaluations in the study covered the appropriate use of force by measuring a police officer's ability to assert authority, avoid unnecessary confrontations, respect the rights of citizens, and follow department policies (Appendices A & B).

### **Education and Disciplinary Actions**

The profession of law enforcement carries with it significant public expectations about how police officers will conduct themselves regarding professional ethics and professionalism generally. Policing routinely involves processing illegal drugs, encountering large sums of money, dealing with criminals with little regard for agency rules about the use of force, and many other scenarios having the potential to lead police officers to receive disciplinary sanctions, up to and including termination (Kane, White, & McCoy, 2013). This study's research questions addressed whether higher levels of education were correlated with the performance of police officers and, consequently, the number of behaviors leading to disciplinary actions.

The failure to demonstrate acceptable performance on any of the performance categories on the supervisory performance evaluation at the study site (Appendices A & B) has the potential to result in disciplinary actions. This connection makes a review of literature examining the relationship between education and police disciplinary actions particularly relevant to the study. The literature revealed mixed results, with some studies showing a significant relationship between higher education and fewer disciplinary actions (Cunningham, 2003; Manis, Archbold, & Hassell, 2008; White & Kane, 2013) and other studies showing no such relationship (Henson et al., 2010; Smith & Aamodt, 1997).

Cunningham (2003) found widespread support for postsecondary education having a positive effect on police officer behavior while examining state-wide data for disciplinary actions taken against Florida law enforcement officers by the state's Criminal Justice Standards and Training Commission over a period from 1997 through August 2002. Because the Commission handled all significant disciplinary actions having the potential to lead to a loss of police certification, the data included all certified Florida law enforcement officers (approximately 43,000). Progressively higher educated officers in Florida were significantly less likely to receive disciplinary actions, including routine disciplinary actions and severe infractions leading to the loss of police officer certification.

While Cunningham's (2003) research was the only study with access to state-wide data in the United States, other studies found during this literature review showed education to be a predictor of behaviors leading to disciplinary actions in diverse geographic settings. White and Kane (2013) showed higher education to be a significant predictor of career-ending behaviors in the New York City Police Department. Higher education significantly reduced the chance of early termination for misconduct among New York City police officers.

Manis et al. (2008) examined the relationship between police officer education and allegations of misconduct in a midwestern municipal police department, seeking to answer whether there were differences in the number of formal and informal complaints filed against patrol officers based on educational level and how education impacted disciplinary actions received by police officers. Formal complaints consisted of complaints officially filed against patrol officers while informal complaints included communication to the internal affairs division by personal, phone, or electronic communications where the citizen did not wish to file a formal complaint but merely express dissatisfaction with services rendered. Police officers with four-year degrees were less likely to generate formal complaints. Police officers without four-year degrees were more likely to have complaints sustained and to have discipline administered after a citizen files a complaint. No statistically significant relationship existed between education and informal complaints or education and the frequency of complaints of either type.

Other studies in this area yielded mixed results or found no relationship between education and discipline. No significant correlation existed between education and the number of times Virginia police officers required discipline or the number of vehicle crashes involving officers (Smith & Aamodt, 1997). Truxillo et al. (1998) studied the relationship between college education and disciplinary actions in a metropolitan police department in the southern United States. Disciplinary actions examined included letters of reprimand and suspensions from duty. Only one significant relationship between education and discipline existed: Police officers with a four-year degree were marginally less likely to receive letters of reprimand. Education has had no impact on the number of citizen complaints received by Cincinnati police officers (Henson et al., 2010).

An examination of disciplinary actions was initially considered for the present study. The absence of a significant number of disciplinary actions due to the size of the agency under examination would likely limit the value of the results. The attitudes and behaviors measured in the supervisory performance evaluations (Appendices A & B) likely reflect the propensity for police officers in the study to be subject to disciplinary actions.

### **Education and Supervisory Ratings of Performance**

Krimmel (1996) suggested the implementation of accurate personnel performance evaluations in law enforcement agencies is important to provide an analysis of the potential links between education and performance. The present study's agency of interest continuously maintained a supervisory performance evaluation system during the time period under study (2013–2015). The study's research questions addressed whether higher levels of education were correlated with police officer performance as measured by supervisory performance evaluations.

Though most law enforcement agencies in the United States employ some type of supervisory rating process (Gul & O'Connell, 2013), a review of the literature revealed few studies examining the potential relationship between police officer education and supervisory ratings of performance. This literature review revealed no recent studies (post-2010), exposing a large methodological gap in the body of knowledge examining police officer education and performance. This study aimed to help fill this gap with recent data in a geographical setting different from existing research.

Smith and Aamodt (1997) examined the relationship between education and police performance in Virginia with two hypotheses: there would exist a significant relationship between education and performance and police officers with college degrees would improve their performance with experience as non-college-educated officers remained stagnant.



Performance measures included overall performance, communications skills, public relations skills, report writing skills, response to training, decision-making ability, and organizational commitment. Education was significantly positively correlated with most performance categories, including overall performance. Truxillo et al. (1998) found further evidence of education as a potential predictor of police officer job performance when measured by supervisory performance ratings. Supervisory ratings in the study covered the categories of job knowledge, quality of work, volume of work, dependability, and cooperation. Education was significantly positively correlated with both promotions and supervisory ratings of job knowledge. Results for the relationship between education and the remaining performance areas were mixed or insignificant.

The findings in both studies (Smith & Aamodt, 1997; Truxillo et al., 1998) were generally supportive of the present study's hypotheses linking higher education to police officer performance, though not all performance categories are positively correlated with education. In contrast to these studies, education had no significant relationship with postacademy supervisory evaluations of police officer performance in Cincinnati (Henson et al., 2010). This finding demonstrates even among the limited number of studies in the literature, there is not a consensus about the relationship between police officer education and supervisory evaluations of performance.

Smith and Aamodt (1997) and Truxillo et al. (1998) provided several suggestions about the value of police officer education and the need for further research in this area with respect to supervisory performance evaluations. College education may better allow officers to handle increasingly complex work coming with additional experience (Smith & Aamodt, 1997). College-educated officers possibly exhibit a greater retention of skills learned in both their

postsecondary education and the police academy, suggesting college degree requirements would be beneficial to law enforcement agencies (Smith & Aamodt, 1997). College-educated officers may be more motivated, more skilled in test taking, or possess higher levels of professionalism, potentially explaining the relationship between education and promotions (Truxillo et al., 1998). Both studies demonstrated the need for additional research related to police officer education and supervisory performance evaluations in a variety of geographic settings, supporting the study's purpose.

The performance dimensions used by Smith and Aamodt (1997) and Truxillo et al. (1998) are all included as components of multiple performance categories on the performance evaluation instrument used in the present study (Appendices A & B). The studies in this portion of the literature review are the closest in methodology to the present study due to their use of supervisory performance ratings as measures of police officer performance. This study was designed to provide an updated analysis of education's relationship with supervisory ratings of performance ratings in a different geographical setting (Tennessee) and in a more modern policing era.

### **Education and Self-Ratings of Performance**

A literature review of studies examining police officer self-ratings of performance was conducted to supplement the dearth of literature on supervisory performance ratings. The intent was to gauge how police officer education relates to self-perceived performance and how this relationship, if any, may differ from supervisory views of performance in the existing literature and in the present study. Results were mixed, though positive relationships between police officer education and some performance categories existed in all studies found in this review (Carlan, 2007; Kakar, 1998; Krimmel, 1996).

Krimmel (1996) found mixed, but generally positive results when addressing the potential relationship between the education of police officers and self-rated job performance. Respondents from police departments of varying sizes in Howell Township, New Jersey, and Bucks County, Pennsylvania, rated themselves in 45 different performance categories. For both samples, officers possessing a bachelor's degree generally rated themselves higher in approximately 90% of the performance categories. However, most of these superior ratings were not statistically significant. There was a statistically significant positive correlation between education and performance ratings for Howell Township officers in three out of 45 categories: knowledge of departmental rules, officer safety, and acceptance of change. There was a similar statistically significant positive relationship in Bucks County for 13 out of 45 categories.

Kakar (1998) found more significant evidence of a relationship between education and the self-rated performance of Florida police officers. Kakar sought to determine if there was a relationship between education and a police officer's perceptions of their performance, to identify the performance categories in which police officers with college degrees perceive themselves as performing better, and to determine whether controlling for years of experience affects these relationships. There was generally a significant positive correlation between education level and most self-ratings of performance even when controlling for years of experience. A significant positive correlation was also discovered between the skillsets of human relations, communication, administration, and critical thinking and the level of degree earned among Alabama police officers, supporting a relationship between education and self-perceived performance (Carlan, 2007).

Further examining education's impact on performance, Carlan (2007) sought to determine how Alabama police officers with criminal justice degrees value their education in

comparison with police officers having backgrounds in different academic disciplines. Carlan tested two hypotheses. First, police officers would recognize the value of criminal justice degrees and value the degree's contribution to policing to a greater extent than police officers having degrees in other disciplines. Second, police officers' perception of a criminal justice degree's value would increase with increasing education levels but would be independent of other demographics. No significant difference existed in the respondents' views about the value of their degrees between criminal justice and non-criminal justice degree holders. Specifically, respondents did not view either degree type to be superior in producing police officers with human relations skills, communication skills, administrative skills, or critical thinking skills. The present study did not differentiate between different degree majors since this factor has proved irrelevant when relating postsecondary education to police officer performance (Carlan, 2007).

### **Appraising Performance in Law Enforcement**

Performance appraisals in the profession of law enforcement include two levels: the appraisal of an organization's performance and the appraisal of individual police officers (Gorby, 2013). Since the goal of individual police officers is to support the law enforcement agency's mission and vision, the two levels are related. This relationship was reflected in multiple categories of this study's supervisory performance evaluation where police officers are rated on their ability to follow the policies and carry out the agenda of the agency (Appendices A & B). A discussion of methods used to appraise performance in law enforcement agencies is relevant to the study.

Law enforcement agencies in the United States wishing to appraise institutional effectiveness have historically used measures of performance associated with traditional police

roles and activities such as crime rates, number of arrests, crime clearance percentages, and response times (Gorby, 2013; Sparrow, 2015). Performance appraisals for individual police officers have followed these guidelines, resulting in supervisory evaluations placing emphasis on objectively measured raw numbers such as a police officer's number of arrests over the course of a year (Gorby, 2013). The problem is these types of appraisals fail to provide a true evaluation of police officer performance due to the inherent subjectivity and measurement difficulties associated with police officer performance (Gorby, 2013). These appraisals also fail to capture the skills required to address modern policing challenges such as increased international terrorism, rapidly changing technology, a larger immigrant population, constantly changing laws, cultural revolutions, and a growing mental health crisis (President's Task Force, 2015).

Effective performance appraisals for police officers serve two main functions: an administrative purpose (e.g., allocating raises and justifying promotions) and a contribution to employee development via two-way feedback between police officers and evaluators (Gul & O'Connell, 2013). Standardized performance evaluations used across all departments in municipal governments are not adequate to meet the needs of law enforcement agencies (Williams, Christensen, LePere-Schloop, & Silk, 2015). Law enforcement executives should tailor performance evaluations to address police-specific competencies (Williams et al., 2015). Evaluations must also measure a broad range of skills relevant to modern policing (Sparrow, 2015).

The supervisory performance evaluation used in the present study (Appendices A & B) was representative of effective performance appraisals used in modern law enforcement agencies. It was used exclusively within the police department of a municipal government and was tailored specifically to the job of police officer within the department. The evaluation

measured a diverse skillset including both traditional measures of performance (e.g., proactive enforcement actions) and modern qualities required of a police officer (e.g., respect for diversity and technological skills).

### **Chapter Summary**

Chapter 2 detailed the literature search strategy and the theoretical framework guiding the study. This chapter provided a literature-based history of education, performance appraisal, and policing in the United States over the past century for historical context. The literature review summarized studies examining police officer education and performance, organized by several performance measures: occupational attitudes, police academy performance, the use of force, disciplinary actions, supervisory ratings of performance, and self-ratings of performance.

Regardless of the performance measures studied, the literature review revealed inconsistent results in the search for a definitive relationship between police officer education and performance. A significant gap in the literature was discovered while searching for studies relevant to law enforcement agencies geographically and demographically similar to the Tennessee agency under examination in the present study. Few studies made use of supervisory evaluations as a measurement of police officer performance. One common theme emerged: repeated suggestions by study authors for additional research in law enforcement agencies other than those previously studied.

Law enforcement executives throughout the United States must make informed decisions about educational hiring criteria for police officers. The problem revealed by the literature review is there is minimal research-based consensus about the benefits of a postsecondary education degree as it relates to police job performance, leaving police executives with little guidance when establishing these hiring criteria (Hilal et al., 2013). The purpose of this

quantitative correlational study was to determine the degree to which the possession of a postsecondary education degree was correlated with measures of police officer job performance in a medium-sized law enforcement agency in Tennessee.

In addition to providing agency leaders at the study site with information about how hiring practices requiring college degrees may have impacted the performance of employees in the agency, the study also aimed to contribute to the larger body of knowledge in criminal justice research dedicated to examining postsecondary education as a potential predictor of job performance. The study helps to fill the gap in the literature identified in this literature review. Chapter 3 addresses the research methods used in the study.

### Chapter 3: Research Method

The purpose of this quantitative correlational study was to determine the degree to which the possession of a postsecondary education degree was correlated with measures of police officer job performance. T.C.A. requires all persons employed as full-time police officers in the state of Tennessee to possess a high school diploma or a general education development certificate (T.C.A. § 38-8-106, 2015). State-wide requirements do not exist requiring the possession of any type of postsecondary education degree. Job performance was measured in four specific areas: general professionalism, productivity, technical knowledge, and management skills. This measurement was accomplished by examining numerical supervisory evaluations and education data for a three-year period (2013–2015) in a medium-sized municipal law enforcement agency in the state of Tennessee.

Similar studies examining police officer education and various performance measures have revealed mixed or inconclusive results and have produced repeated suggestions for additional studies in different settings (Chapman, 2012; Paoline et al., 2014; Rossler & Terrill, 2012). This study was designed to provide agency leaders at the study site with information about how hiring practices requiring college degrees may have impacted the performance of employees in the agency. Failing to conduct such research may have left agency leaders uninformed when making future decisions about the value of strengthening or lessening hiring and promotion requirements for postsecondary education. This study also aimed to contribute to the larger body of knowledge in criminal justice research dedicated to examining postsecondary education as a potential predictor of job performance in an additional geographic setting unique from currently existing studies.



Chapter 3 details the research methods and design used in the study. This chapter restates the purpose of the study and the research questions and hypotheses addressed by the study. A discussion of the study's design includes information about the study's population and sample, data collection methods, the reliability and validity of the study, data analysis methods, and the theoretical framework guiding the study. Since the study site also employs the researcher, a discussion of researcher objectivity related to data analysis and hypothesis testing is also included.

### **Research Questions and Hypotheses**

To achieve the purpose of the study, the research questions for this quantitative study were as follows:

Research Question 1: What degree of correlation, if any, exists between the possession of a postsecondary education degree by police officers and supervisory ratings of professionalism?

Research Question 2: What degree of correlation, if any, exists between the possession of a postsecondary education degree by police officers and supervisory ratings of productivity?

Research Question 3: What degree of correlation, if any, exists between the possession of a postsecondary education degree by police officers and supervisory ratings of technical knowledge?

Research Question 4: What degree of correlation, if any, exists the possession of a postsecondary education degree by police officers and supervisory ratings of management skills?

The hypotheses for the study's research questions were as follows:

H1<sub>0</sub>: There is no significant correlation between the possession of a postsecondary education degree by police officers and supervisory ratings of professionalism.

H1<sub>a</sub>: There is a significant positive correlation between the possession of a postsecondary education degree by police officers and supervisory ratings of professionalism.

H2<sub>0</sub>: There is no significant correlation between the possession of a postsecondary education degree by police officers and supervisory ratings of productivity.

H2<sub>a</sub>: There is a significant positive correlation between the possession of a postsecondary education degree by police officers and supervisory ratings of productivity.

H3<sub>0</sub>: There is no significant correlation between the possession of a postsecondary education degree by police officers and supervisory ratings of technical knowledge.

H3<sub>a</sub>: There is a significant positive correlation between the possession of a postsecondary education degree by police officers and supervisory ratings of technical knowledge.

H4<sub>0</sub>: There is no significant correlation between the possession of a postsecondary education degree by police officers and supervisory ratings of management skills.

H4<sub>a</sub>: There is a significant positive correlation between the possession of a postsecondary education degree by police officers and supervisory ratings of management skills.

### **Design of the Study**

This study was a quantitative correlational design examining the relationship between dichotomous education and mean ratings in four performance categories: general professionalism, productivity, technical knowledge, and management skills. Education level was the independent variable of interest. There were four dependent variables: (a) general professionalism, (b) productivity, (c) technical knowledge, and (d) management skills. The

variables were sourced from secondary data sources located in public personnel files for the municipality under study. This study was not designed to interpret any statistically significant correlations as definitive evidence of a causal relationship between the possession of a postsecondary education degree and measures of police officer job performance.

### **Design Appropriateness**

A quantitative correlational design is appropriate when investigating the degree of relationship between two or more variables (Creswell, 2015). This design may be applied to existing data if they are in numerical form, as in this study (Creswell, 2015). The variables for which such a relationship was examined in this study were a dichotomous postsecondary education variable and job performance as measured by supervisory evaluations. The correlation between a dichotomous variable, such as the study's education variable, and a continuous variable, such as the study's mean numerical rating of job performance in specific categories, may be analyzed using a point-biserial correlation ( $r_{pb}$ ); this method is a special application of the Pearson product moment correlation (Leedy & Ormrod, 2013).

The use of existing data to conduct a secondary data analysis is appropriate when there is a need to investigate research questions other than the ones for which the original data were gathered (Grady, Cummings, & Hulley, 2013). Education data in the form of official high school and college transcripts were originally collected by human resources personnel during each police officer's initial hiring process to verify minimum educational requirements. Education data were also continuously collected throughout the police officer's employment period at the study site if additional postsecondary degrees were completed and official transcripts were provided by the police officer to human resources personnel. Supervisory performance evaluations were originally collected annually and stored in human resources

personnel files to evaluate and document employee performance. This study used the data for a different purpose: to determine to what degree, if any, possessing a postsecondary education degree correlated to police officer job performance in the specific categories of general professionalism, productivity, technical knowledge, and management skills.

A quantitative approach to the study was selected to address the research questions rather than a mixed-methods or qualitative approach. The evaluations contained room for typed comments from supervisors about the police officer's performance in the four performance categories as well as room to elaborate on the police officer's strengths, weaknesses, areas for improvement, and future goals (Appendix A). Since the open-ended questions for the four performance categories were aligned with the numerical ratings for each performance category (e.g., "Please add comments about this person's general professionalism"), there would have likely been no additional value in compiling and coding these qualitative data for a correlation analysis since the results should not differ significantly from the correlation analysis conducted using the quantitative numeric ratings in the same performance category. The open-ended questions related to strengths, weaknesses, areas for improvement, and future goals were not aligned to any performance category; therefore, they were not aligned with the four research questions and would not contribute to an understanding of the relationship between police officer education and performance.

### **Population and Sample Selection**

The research population consisted of 85 police officers serving in a nonsupervisory patrol capacity employed by one medium-sized municipal law enforcement agency in the state of Tennessee. This research sample was a total sample of all police officers employed by the agency in a patrol capacity who received a performance evaluation for the position of police

officer for at least one year of the three-year period encompassed by the study. Total population sampling in this manner is appropriate when the population is on the order of 100 or fewer (Leedy & Ormrod, 2013). Data for police officers who left the agency during the study period for any reason (e.g., retirement) was included in the study for the years for which they received a performance evaluation. Police officers serving in a specialized capacity (e.g., detectives) or supervisory positions were not included in the sample for years where they served in these positions due to differences in job descriptions and evaluation instruments when compared to police officers serving in a patrol capacity.

The law enforcement agency under examination employed an average of 156 personnel, including an authorized strength of approximately 100 police officers serving in a patrol capacity, during the study period. The agency served a resident population of approximately 70,000 people and a significant daily transient population consisting of those who worked in and passed through the municipality. The agency existed in a unique demographic setting; it was situated in the wealthiest county in Tennessee (and among the top wealthiest counties in the United States) as measured by median income, but also represented a diverse population, including residents living in publicly funded housing and communities comprised largely of immigrant workers. The agency was one of only 19 municipal law enforcement agencies in Tennessee voluntarily accredited by the Commission on Accreditation for Law Enforcement Agencies (2017), requiring it to maintain professional standards consistent with law enforcement best practices. Hiring criteria for the agency were consistent with state minimum standards requiring only the equivalent of a high school degree (T.C.A. § 38-8-106, 2015). Additional points in the hiring process were given for possessing postsecondary education degrees and

additional recruiting efforts were made to target recruits with some level of postsecondary education.

Selecting a population consisting of all nonsupervisory police officers in the state of Tennessee was considered for the study. The most recent census of state and local law enforcement agencies by the Bureau of Justice Statistics (2008) revealed there were 15,976 sworn law enforcement officers employed in the state of Tennessee, including supervisory ranks not of interest in this study. There was no data available breaking down law enforcement officers into supervisory and nonsupervisory populations. Even using a reasonable estimate of nonsupervisory officers (e.g., 13,000) would require a large sample size ( $n > 374$ ) to maintain a confidence level of 95% and a confidence interval of  $\pm 5\%$  for the study's correlation analysis. Further, there were no consistent methods of measuring performance from supervisory performance evaluations between different law enforcement agencies since all agencies used different criteria and categories for these evaluations; this effectively limited the study to one agency. The diversity of law enforcement agencies in Tennessee and the unique characteristics of the agency of interest potentially limited the generalizability of the study, as is further evidenced by the inconsistent results of similar studies summarized in Chapter 2. For these reasons, the population for the study was limited to one agency using a total population sampling method.

### **Data Collection Procedures**

This quantitative correlational study required the collection of both demographic and performance data from secondary sources from public police personnel files from the human resources department of a medium-sized municipality in Tennessee. Data used for the study were drawn from publicly available data and open records as defined by open records statutes in

the state of Tennessee (T.C.A. § 10-7-503, 2016). Personnel data, including supervisory evaluations and education level, were sourced from public human resources records. Tennessee law states all law enforcement personnel records, including supervisory performance evaluations, are open for public inspection without a written request when no copies are sought (T.C.A. § 10-7-503, 2016). The data were collected in person in the human resources office from hard copies of public personnel files. Municipal police at the research site required all data relevant to this research study to be housed in the human resources department, making this location the most appropriate source for these data.

Education data, performance evaluation scores, and other relevant data were gathered and entered into SPSS 25.0 for later statistical analysis. This process consisted solely of reviewing and recording/entering information using the researcher's personal password-protected laptop computer and saving the data to password-protected cloud storage; no original documents or copies of documents found in human resources files were removed from the building. This process took approximately three weeks and occurred during the site's business hours.

### **Education Data Collection**

An electronic database of education level information for municipal employees at the research site was not available. Education data was collected from hard copy human resources personnel files at the research site's human resources department. All police officers were assumed to have the minimum requirement of a high school diploma or its equivalent per statutory requirements for police officer employment and certification in Tennessee (T.C.A. § 38-8-106, 2015). Personnel receiving postsecondary degrees at the research site provided copies of official transcripts for postsecondary conferred degrees to the human resources department for inclusion in their personnel files; there was no additional annotation made inside the file

regarding an employee's education level. The researcher examined these personnel files for evidence of conferred degrees in the form of official transcripts and transcribed this information to the SPSS software installed on a personal laptop computer. Education information was stored in the form of a dichotomous education variable ("Degree" or "No Degree").

### **Performance Data Collection**

Human resources personnel files at the research site contained hard copies of all performance evaluations (Appendix A) completed for all police officers. The personnel files were reviewed by the researcher to view and transcribe numeric performance ratings from these evaluations. Performance score data for the four performance categories and relevant subcategories were entered by the researcher into the SPSS software installed on a personal laptop computer. Mean scores for the four performance categories were calculated within SPSS using the built-in "MEAN" software function.

### **Instrumentation**

This study examined secondary data, including a supervisory evaluation instrument previously used annually by Patrol Supervisors to rate employee performance for the study period of 2013–2015 (Appendix A). These years represented the most recent three years of consecutive data prior to a new electronic evaluation instrument being adopted at the study site in 2016. The instrument used by supervisors during this period of interest consisted of four performance categories: general professionalism, productivity, technical knowledge, and management skills. Each category was further divided into four to nine subcategories where police officers were rated on a continuous scale of 1 to 6. These subcategories measure 24 specific skills as a subset of each of the four performance categories (e.g., relationship with peers



is a subcategory of general professionalism). Table 2 shows the four performance categories and the relevant subcategories.

Table 2

*Supervisory Evaluation Performance Categories and Related Subcategories*

General professionalism	Productivity	Technical knowledge	Management skills
Dependability	Initiative/work ethic	Technical skills	Judgment/common sense
Cooperation/teamwork	Avoiding problems	Organizational policies	Officer safety
Positive attitude/enthusiasm	Aligning efforts/goals	Situational adaptability	Work ethic
Personal accountability	Proactive enforcement	Relates to others	Taking control
Relationships (supervisors)	Punctuality		Emotional control
Relationships (peers)			Time management
Interpersonal skills			
Attitude about performance			
Flexibility/adaptability			

*Note.* The four performance categories are listed with subcategories underneath. Each subcategory is scored from 1 to 6. The mean score for all subcategories makes up the overall score for the category to be used in the correlation analysis. Detailed descriptions are provided in Appendix B.

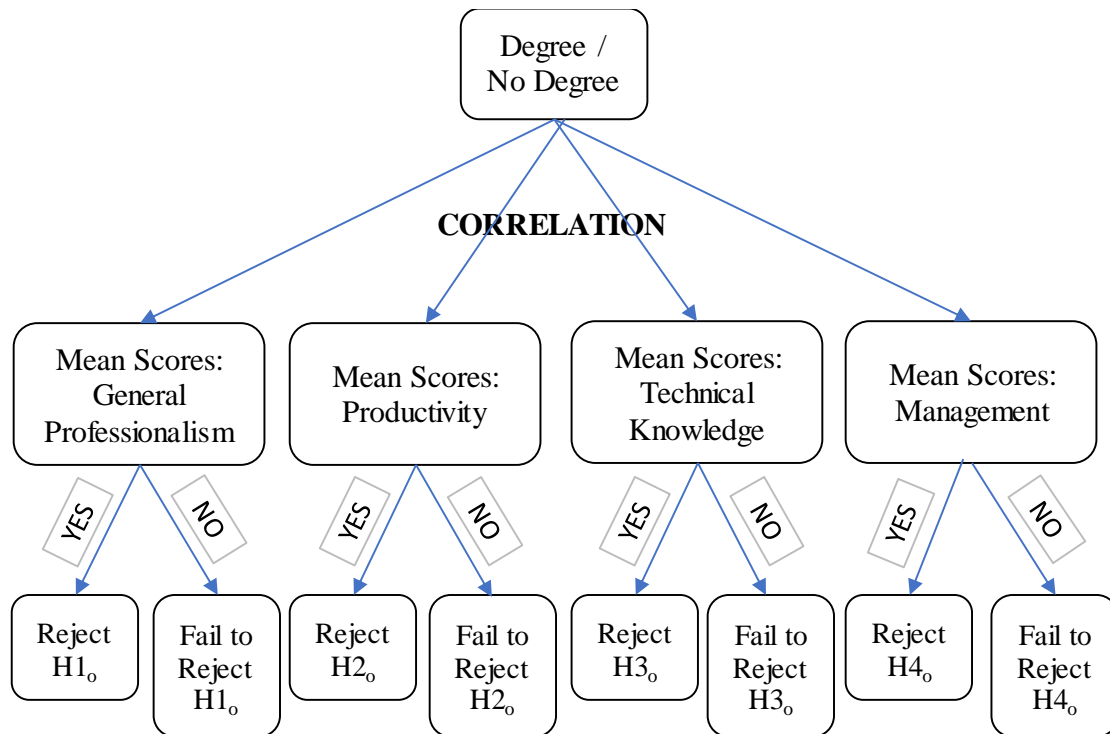
The evaluation document contained a grading guide originally used to provide Patrol Supervisors with benchmarks for scoring the performance of police officers under their supervision. These benchmarks included both employee descriptors (e.g., meets expectations) and frequency descriptors (e.g., almost always). Supervisors were also advised an average score of 3.50 was the standard for meeting expectations. Hovering over each subcategory with the mouse on the original electronic spreadsheet version of the evaluation revealed definitions for each subcategory; these are provided in Appendix B.

The mean scores for each of the four performance categories (general professionalism, productivity, technical knowledge, and management skills) were calculated from the scores in each subcategory (four to nine scored skills under the heading of the main performance category) and were used for a correlation analysis with the dichotomous education variable for the study. All subcategory scores were assumed to represent the intended score of the original supervisor rater. The evaluation instrument contained sections for the inclusion of free-form comments by supervisors to further explain the numerical performance ratings. These qualitative data were not used for this quantitative study.

### **Data Analysis**

The purpose of the data analyses in this quantitative study was to determine the degree to which the possession of a postsecondary education degree was correlated with measures of police officer job performance. The dichotomous education variable and the mean performance rating scores for the four performance categories were entered into SPSS. Education was labelled as either “Degree” or “No Degree,” indicating whether the police officer being evaluated had a postsecondary education degree during the year of their original evaluation. Each of the four categories on the evaluation (general professionalism, productivity, technical knowledge,

and management skills) had four to nine subcategories scored on a scale from 1 to 6 as shown in Table 2. The mean score for each category was calculated from the scores for these subcategories. These calculations produced one dichotomous education variable and four mean performance score variables per evaluation. Figure 2 shows a visual depiction of the correlation analysis and how it related to the rejection or failure to reject the four relevant null hypotheses.



*Figure 2.* Visual depiction of the point-biserial correlation analysis used to address the four research questions in this study.

All available performance evaluations for the three-year period of study were used for the data analysis. The point-biserial correlation coefficient ( $r_{pb}$ ) was used to determine if there was a statistically significant relationship between the independent dichotomous education variable and

the dependent mean performance rating score variables for each of the four performance categories, resulting in four correlation analyses. The point-biserial correlation is a special application of the Pearson product moment correlation used when one variable is dichotomous and one variable is continuous (Leedy & Ormrod, 2013). The results were used to address the hypotheses for the four research questions, determining if there was a statistically significant correlation between the possession of a postsecondary education degree and mean scores for performance in each of the performance categories: general professionalism, productivity, technical knowledge, and management skills.

SPSS does not have a special procedure for the point-biserial correlation analysis since it is mathematically equivalent to the Pearson  $r$ , but simpler with a score of 0 or 1 for the dichotomous variable. To calculate the point-biserial correlations in SPSS, the Bivariate Correlations dialog box was opened and the options Analyze, Correlate, and Bivariate were chosen in sequence. In the dialog box both variables were added to the list of variables to be analyzed and Pearson correlation coefficient was selected along with a two-tailed test of significance. The output included a Pearson correlation coefficient ( $r_{pb}$ ) and a  $p$  value. A  $p$  value of less than or equal to the alpha level of .05 would indicate a statistically significant correlation (Leedy & Ormrod, 2013) between the education variable and the performance variable and a rejection of the relevant null hypothesis.

### **Reliability and Validity**

The evaluation instrument in this study was not designed by the researcher, requiring further discussion about the reliability and validity of police performance evaluations generally and how they relate to the evaluation instrument used in this study.

**Reliability**

Police officers in the agency under study were generally assigned supervisory raters based on common work schedules so the rating supervisor could best judge the performance of the officer. The existence of a single rater for each officer and a single evaluation per calendar year did not allow for an analysis of interrater reliability or test–retest reliability. Police officer performance evaluations have been shown to demonstrate high reliability when they are based on measurements of observable behaviors and activities rather than subjective and poorly defined personal characteristics unable to be improved upon (Gul & O’Connell, 2013). The evaluation instrument in this study (Appendix A) was based on clearly defined criteria (Appendix B) largely based on job-specific behaviors and activities scored on a scale allowing room for future improvement.

Similar systems of supervisory performance evaluation have been used in previous research comparing police officer performance evaluation scores and education (Smith & Aamodt, 1997; Truxillo et al., 1998). The evaluation instrument in this study was used for a period of approximately 10 years. The evaluation was used for purposes including verifying police officers maintained minimum performance, establishing eligibility for promotions, providing a numerical basis for incentive-based pay increases, and documenting disciplinary issues resulting in sanctions up to and including termination.

**Validity**

Gul and O’Connell (2013) reviewed characteristics of police performance evaluation processes designed to increase validity. These characteristics include a system where employee behaviors are measured rather than characteristics, raters have a high degree of job knowledge, raters have been properly trained on the evaluation system, performance dimensions are highly

relevant to the job of police officer, constructive mutual feedback occurs between raters and police officers with the goal of improving future performance, and police officers have opportunities to appeal ratings (Gul & O'Connell, 2013). The evaluation instrument used in this study met these criteria for validity.

The measurement of employee behaviors rather than characteristics was previously discussed in the discussion of reliability. Raters in the agency under examination were patrol sergeants who all generally had more than 10 years of law enforcement experience providing them with a high degree of job knowledge. Patrol sergeants received training and guidance from the municipal human resources department and police department administration on how to complete the evaluations. This guidance included a scoring rubric (included in Appendix A) and detailed descriptions of each evaluation subcategory (Appendix B). Additionally, the policies and procedures for the municipality's performance evaluation program were included in the human resources manual available to all city employees.

The evaluation instrument consisted of four major categories, including general professionalism, productivity, technical knowledge, and management skills; each category was subdivided into more specific skills. The 24 total subcategory scores on the instrument represented the diverse skillset a police officer is required to possess; it demonstrated content validity in this regard by measuring achievement in various domains in proportion to the actual skills required of a police officer (Leedy & Ormrod, 2013). Appendix B contains a scoring guide for the 24 subcategories, providing a description of the skills the evaluation was intended to measure. Performance evaluations were presented to the police officers in person and an opportunity for mutual feedback between the police officer and his or her supervisory rater was provided. Municipal policies at the study site provided all employees, including police officers,

with the opportunity to appeal evaluations through city administration and receive corrections should any score be determined to be an inaccurate reflection of performance. Based on these research-based criteria, the evaluation instrument demonstrated high validity. Additionally, the instrument demonstrated concurrent validity in its ability to distinguish between employees performing at different levels.

### **Ethical Procedures**

This research consisted solely of an examination of secondary data in the form of publicly available human resources records as defined by Tennessee law (T.C.A. § 10-7-503, 2016). At the time of this study, all citizens of Tennessee, to include the researcher, were permitted by law to inspect supervisory performance evaluations and evidence of conferred postsecondary education degrees contained in the personnel files of police officers without filing a written records request (T.C.A. § 10-7-503, 2016). Tennessee law provided a procedure for a redaction of these records to remove any personal information deemed confidential prior to release (T.C.A. § 10-7-503, 2016); no confidential information, as defined by state law, was requested or used by the researcher. Confidential information included home and personal telephone numbers, personal addresses, financial account information, social security numbers, driver license information, emergency contact information, personal e-mail addresses, and the preceding information of family or household members of police officers (T.C.A. § 10-7-504, 2017). Tennessee law also required the records custodian to notify the police officer whose records were inspected of the inspection request, who inspected the records, and when they were inspected; this was required to occur within three business days of the inspection (T.C.A. § 10-7-503, 2016). This procedure was followed by human resources staff.

Any citizen of Tennessee may inspect the same records as the researcher for any purpose, including to verify the data obtained by the researcher. While police officers in Tennessee had no expectation of privacy with respect to nonconfidential portions of these records per state law, steps were taken to protect participant confidentiality in this study. Any citizen of Tennessee wishing to view the same personnel records as the researcher are required to follow the records request procedures provided by law. No participant data has been or will be shared with any third party by the researcher. Neither the agency being examined nor the identity of employees whose educational and performance evaluation data were included in research data files. These files substituted participant numbers for names and only the researcher maintained a list of names and assigned numbers. Data were personally collected and transcribed in the human resources department in a private setting using the researcher's personal password-protected laptop computer. Electronic data consisting of SPSS 25.0 proprietary data files were stored in password-protected cloud storage accessible only by the researcher. These files will be retained in such storage for a period of 10 years from the conclusion of the study.

The U.S. Department of Health and Human Services policy entitled "Protection of Human Research Subjects" found in the Code of Federal Regulations (45 C.F.R. § 46) governs all research involving human subjects. Research may be exempted from this policy if it involves

The collection or study of existing data, documents, [or] records . . . if these sources are publicly available or if the information is recorded by the investigator in such a manner that subjects cannot be identified, directly or through identifiers linked to the subjects.

(Protection of Human Research Subjects, 45 C.F.R. § 46.101, 2009)

Data collection procedures for this study were designed to be consistent with this exemption.

The law enforcement agency under examination also employed the researcher as a Patrol



Supervisor, potentially raising questions about the reasons for an inspection of personnel files. To ensure police officers employed at the study site were aware of the purpose of the study, the research questions being addressed, the potential benefits and risks, and how information contained in personnel files was to be used, an informed consent document was distributed to police officers employed by the agency under examination who met the criteria for selection in the study. This distribution occurred prior to the collection of data and included an option to opt out of study participation. This document is included in Appendix C.

### **Chapter Summary**

The purpose of this quantitative correlational study was to determine the degree to which the possession of a postsecondary education degree was correlated with measures of police officer job performance. Job performance was measured in four specific areas: general professionalism, productivity, technical knowledge, and management skills. This measurement was accomplished by examining numerical supervisory evaluations and education data for a three-year period (2013–2015) in a medium-sized municipal law enforcement agency in the state of Tennessee. Chapter 3 outlined the methods by which the research was conducted, including the appropriateness of the quantitative correlative design, the sampling method, how data was collected and analyzed, and the theoretical framework used to guide the study. The study aimed to contribute to the larger body of knowledge in criminal justice research dedicated to examining postsecondary education as a potential predictor of job performance while also providing guidance to law enforcement executives at the study site about the value of postsecondary education degree requirements in the study setting. Chapter 4 reveals the results of the data analysis procedures described in this chapter.

## Chapter 4: Results

The purpose of this quantitative correlational study was to determine the degree to which the possession of a postsecondary education degree was correlated with measures of police officer job performance. Job performance was measured in four specific areas: general professionalism, productivity, technical knowledge, and management skills. This measurement was accomplished by examining numerical supervisory evaluations and education data for a three-year period (2013–2015) in a medium-sized municipal law enforcement agency in the state of Tennessee.

Chapter 4 provides a summary of the data collection procedures used in this study. Demographic educational information about the law enforcement agency under examination was revealed by the data collection and is provided for purposes of comparison with other law enforcement officers and workers in the United States. This chapter summarizes the results of the statistical analyses described in Chapter 3. A discussion of how these results address this study's research questions and hypotheses is also provided.

### **Data Collection**

The study sample was drawn from police officers employed by a medium-sized municipal law enforcement agency in the state of Tennessee during the three-year period of 2013–2015. A total population sampling method was attempted, initially including all personnel who worked in a nonsupervisory capacity as a patrol officer during the study timeframe of 2013–2015. The researcher initially identified 95 police officers meeting these criteria.

Prior to the commencement of data collection, the researcher sent an e-mail from an official municipal e-mail address to all current sworn members of the law enforcement agency under examination (and two former members currently working for other municipal

departments) informing them of this study's impending data collection, including a notice informed consent letters would soon be delivered from the researcher's personal e-mail address to persons identified as members of the study sample. These informed consent letters (Appendix C) were then delivered via e-mail on December 13, 2017, and included an option to opt out of the study. No personnel elected to opt out.

During the data collection process, it was revealed four of the 95 police officers identified for the sample did not work for a long enough time period during the study period to receive supervisory performance evaluations. Four officers were assigned to special or administrative duties for a long enough time during the study period resulting in them receiving evaluations associated with job titles other than police officer (e.g., investigatory or administrative positions). The personnel files of two police officers were unavailable for inspection and were in possession of the municipality's legal department due to pending criminal or civil action involving these officers. These factors resulted in a final sample of 85 police officers for the study. Table 3 summarizes the selection process for the final sample of 85 police officers.

Data collection occurred over a three-week period from December 15, 2017, through January 5, 2018. Data were collected by the researcher from in-person inspections of personnel files in the human resources office of the municipality under examination. Education data consisted of a dichotomous variable ("Degree" or "No Degree") indicating whether the police officer was in possession of a postsecondary education degree as evidenced by an official transcript. Supervisory performance evaluation data were collected in the form of 24 performance scores per evaluation during the study time period.

Table 3

*Selection of Final Police Officer Sample*

Officer category	No. officers
Officers initially identified as meeting selection criteria	95
No evaluations received during study period	4
Evaluations received for positions other than police officer	4
Files not available (held by legal)	2
Final sample	85

Each police officer personnel record provided a minimum of one and a maximum of three sets of annual performance evaluation and education data, depending on the participant's employment status as a nonsupervisory police officer during each year of the three-year study period. This examination of 85 police officers' personnel records resulted in the collection of 206 total sets ( $n = 206$ ) of education and performance data for analysis.

### **Data Analysis and Results**

The collection of data for this study provided the opportunity to gain additional knowledge about the educational attainment of the research sample. Descriptive statistics for performance evaluation scores were also taken from the data. The data were ultimately used to address this study's research questions and hypotheses.

#### **Education and Descriptive Performance Statistics**

The collection of data provided information about the educational attainment of nonsupervisory police officers in the sample during each year of the three-year period of interest in this study. This information is summarized in Table 4. The data revealed the police officers

in the study sample averaged a degree possession rate of 72% over the three-year period covered by this study.

Table 4

*Educational Attainment of Police Officers in Research Sample*

Year	Degree	No degree	<i>n</i>	% with degree
2013	47	19	66	71%
2014	51	17	68	75%
2015	51	21	72	71%
Mean	50	19	69	72%

*Note.* Degree indicates conferral of associate's degree or higher. Total number of unique police officers in the sample for the three-year period is 85.

Further comparisons were made between the educational attainment of police officers in the study sample, police officers in the United States, and the general population of workers 25 years old and older in the United States. This information is summarized in Table 5.

Table 5

*Educational Attainment in Sample Compared to U.S. Worker Data*

Group	% with degree
Study sample	72.0%
U.S. police officers	55.4%
U.S. general population	46.0%

The data revealed police officers in the study sample were more highly educated than police officers in the United States generally, with 72% of officers in the sample possessing a postsecondary education degree compared to 55.4% for the general population of police officers in the United States (Bureau of Labor Statistics, 2016). Police officers in the study sample were also more highly educated than the general population of workers in the United States; these workers had a 46% postsecondary degree possession rate (Bureau of Labor Statistics, 2016).

The supervisory performance evaluation data was analyzed for each of the four performance categories: general professionalism, productivity, technical knowledge, and management skills. Scores in these categories were calculated from the mean of all subcategory scores in each category as described in Chapter 3. Descriptive statistics about these category scores for the research sample, including mean, median, standard deviation ( $\sigma$ ), minimum scores, and maximum scores, are provided in Table 6.

Table 6

*Descriptive Statistics for Skill Category Scores in Sample*

Skill	<i>M</i>	<i>Mdn</i>	$\alpha$	Min	Max
General professionalism	4.73	4.75	0.46	3.33	6.00
Productivity	4.72	4.66	0.50	3.30	5.65
Technical knowledge	4.65	4.66	0.47	3.25	5.81
Management	4.69	4.69	0.64	3.50	5.75

## Research Questions and Hypotheses

To achieve the purpose of the study, the research questions for this quantitative study were as follows:

Research Question 1: What degree of correlation, if any, exists between the possession of a postsecondary education degree by police officers and supervisory ratings of professionalism?

Research Question 2: What degree of correlation, if any, exists between the possession of a postsecondary education degree by police officers and supervisory ratings of productivity?

Research Question 3: What degree of correlation, if any, exists between the possession of a postsecondary education degree by police officers and supervisory ratings of technical knowledge?

Research Question 4: What degree of correlation, if any, exists the possession of a postsecondary education degree by police officers and supervisory ratings of management skills?

The hypotheses for the study's research questions were as follows:

H1<sub>0</sub>: There is no significant correlation between the possession of a postsecondary education degree by police officers and supervisory ratings of professionalism.

H1<sub>a</sub>: There is a significant positive correlation between the possession of a postsecondary education degree by police officers and supervisory ratings of professionalism.

H2<sub>0</sub>: There is no significant correlation between the possession of a postsecondary education degree by police officers and supervisory ratings of productivity.

H2<sub>a</sub>: There is a significant positive correlation between the possession of a postsecondary education degree by police officers and supervisory ratings of productivity.

H3<sub>0</sub>: There is no significant correlation between the possession of a postsecondary education degree by police officers and supervisory ratings of technical knowledge.

H3<sub>a</sub>: There is a significant positive correlation between the possession of a postsecondary education degree by police officers and supervisory ratings of technical knowledge.

H4<sub>0</sub>: There is no significant correlation between the possession of a postsecondary education degree by police officers and supervisory ratings of management skills.

H4<sub>a</sub>: There is a significant positive correlation between the possession of a postsecondary education degree by police officers and supervisory ratings of management skills.

To address these hypotheses, four point-biserial Pearson correlation analyses (two-tailed) were conducted. The variables used for these analyses included the dichotomous education variable and mean performance ratings for the four performance categories of interest: general professionalism, productivity, technical knowledge, and management skills. These analyses showed the degree of correlation between education (independent variable) and scores in each of the four performance categories (dependent variables) for the study sample. Table 7 summarizes the results of the correlation analyses.

For Research Question 1, the data revealed there was an insignificant positive correlation ( $r = .102, p = .144$ ) between the possession of a postsecondary education degree by police officers and supervisory ratings of professionalism for the research sample. Therefore, there was evidence to fail to reject the null hypothesis.



Table 7

*Correlations Between Degree Possession and Skill Category Scores*

Skill	<i>r</i>	<i>p</i> value
General professionalism	.102	.144
Productivity	.121	.082
Technical knowledge	.172*	.014
Management	.146*	.036

*Note.* Alpha level of .05;  $n = 206$ ; Pearson's  $r$  in use.

\* indicates significant correlation (two-tailed).

For Research Question 2, the data revealed there was an insignificant positive correlation ( $r = .121$ ,  $p = .082$ ) between the possession of a postsecondary education degree by police officers and supervisory ratings of productivity for the research sample. Therefore, there was evidence to fail to reject the null hypothesis.

For Research Question 3, the data revealed there was a significant positive correlation ( $r = .172$ ,  $p = .014$ ) between the possession of a postsecondary education degree by police officers and supervisory ratings of technical knowledge for the research sample. Therefore, there was evidence to reject the null hypothesis.

For Research Question 4, the data revealed there was a significant positive correlation ( $r = .146$ ,  $p = .036$ ) between the possession of a postsecondary education degree by police officers and supervisory ratings of management skills for the research sample. Therefore, there was evidence to reject the null hypothesis.

### **Chapter Summary**

The data collected in this quantitative correlation study served two purposes. The first purpose was to reveal demographic information about the research sample relevant for a comparison of the municipal law enforcement agency under examination and other agencies in the United States. The second purpose was to address the four research questions and hypotheses in this study.

The sample for this study consisted of 85 police officers employed by a medium-sized municipal law enforcement agency in the state of Tennessee during the three-year period of 2013–2015. The data revealed the municipal law enforcement agency under examination employed a higher percentage of police officers with postsecondary degrees when compared to other law enforcement agencies in the United States and when compared to the general population of workers in all professions in the United States. The data did not provide evidence of a significant positive correlation between police officer education and supervisory ratings of performance in the categories of general professionalism and productivity. Significant positive, but weak correlations were found between police officer education and supervisory ratings of technical knowledge and management skills in the study sample. Chapter 5 provides an analysis of these findings and discusses this study's implications, limitations, and resulting recommendations for law enforcement leaders and future researchers.

## Chapter 5: Discussion, Conclusions, and Recommendations

The purpose of this quantitative correlational study was to determine the degree to which the possession of a postsecondary education degree was correlated with measures of police officer job performance. Job performance was measured in four specific areas: general professionalism, productivity, technical knowledge, and management skills. This measurement was accomplished by examining numerical supervisory evaluations and education data for a three-year period (2013–2015) in a medium-sized municipal law enforcement agency in the state of Tennessee. The research sample consisted of 85 police officers employed by this agency who received at least one evaluation for the position of police officer during this three-year period.

The motivation for conducting this study was to assist law enforcement executives throughout the United States, including those in the agency under examination, who are tasked with making informed decisions about educational hiring criteria for police officers. As revealed by the literature in Chapter 2, there is minimal research-based consensus about the benefits of a postsecondary education degree as it relates to police officer job performance (Hilal et al., 2013). A review of the literature examining police officer education and its relationship with various performance measures revealed mixed or inconclusive results along with repeated suggestions for additional studies in different settings (Chapman, 2012; Paoline et al., 2014; Rossler & Terrill, 2012). This study aimed to contribute to the body of literature focusing on the relationship between police officer education and performance by examining data for a law enforcement agency in a geographical setting unique from existing research.

Chapter 3 detailed the methods used to address this study's research questions and hypotheses. The study was a quantitative correlational design examining the relationship between a dichotomous education variable ("Degree" or "No Degree") and mean supervisory

ratings of performance for police officers in four categories: (a) general professionalism, (b) productivity, (c) technical knowledge, and (d) management skills. Education level was the independent variable of interest and the four performance scores were the dependent variables of interest. These performance variables represented the mean scores calculated from four to nine subcategories per supervisory evaluation, as shown in Table 2. A point-biserial correlation analysis was used to measure the degree of correlation, if any, between education and the four performance variables.

The data gathered and summarized in Chapter 4 provided demographic information about the educational attainment of the study sample, revealing the sample to be more highly educated than police officers in the United States generally, with 72% of officers in the sample possessing a postsecondary education degree compared to 55.4% for police officers in the United States (Bureau of Labor Statistics, 2016). Police officers in the study sample were also shown to be more highly educated than the general population of workers in the United States; these workers had a 46% postsecondary degree possession rate (Bureau of Labor Statistics, 2016). The data revealed no evidence of a significant positive correlation between police officer education and supervisory ratings of performance in the categories of general professionalism and productivity for the study sample. Significant positive correlations were found between police officer education and supervisory ratings of technical knowledge and management skills in the study sample.

Chapter 5 provides a discussion of the findings of this study, including how the data may be interpreted and conclusions able to be drawn from the results. Chapter 5 also presents limitations of the study, recommendations for law enforcement executives and future researchers, and a discussion of the implications of the study for leadership.

## **Findings, Interpretations, and Conclusions**

The results of the data analyses detailed in Chapter 4 provided the information required to address this study's research questions and hypotheses. Further interpretations and conclusions from the study data may be drawn in the context of this study's theoretical framework and its place within the existing body of literature.

### **Findings Related to Research**

#### **Questions and Hypotheses**

To achieve the purpose of the study, the research questions for this quantitative study were as follows:

Research Question 1: What degree of correlation, if any, exists between the possession of a postsecondary education degree by police officers and supervisory ratings of professionalism?

Research Question 2: What degree of correlation, if any, exists between the possession of a postsecondary education degree by police officers and supervisory ratings of productivity?

Research Question 3: What degree of correlation, if any, exists between the possession of a postsecondary education degree by police officers and supervisory ratings of technical knowledge?

Research Question 4: What degree of correlation, if any, exists the possession of a postsecondary education degree by police officers and supervisory ratings of management skills?

The hypotheses for the study's research questions were as follows:

H1<sub>0</sub>: There is no significant correlation between the possession of a postsecondary education degree by police officers and supervisory ratings of professionalism.

H1<sub>a</sub>: There is a significant positive correlation between the possession of a postsecondary education degree by police officers and supervisory ratings of professionalism.

H2<sub>0</sub>: There is no significant correlation between the possession of a postsecondary education degree by police officers and supervisory ratings of productivity.

H2<sub>a</sub>: There is a significant positive correlation between the possession of a postsecondary education degree by police officers and supervisory ratings of productivity.

H3<sub>0</sub>: There is no significant correlation between the possession of a postsecondary education degree by police officers and supervisory ratings of technical knowledge.

H3<sub>a</sub>: There is a significant positive correlation between the possession of a postsecondary education degree by police officers and supervisory ratings of technical knowledge.

H4<sub>0</sub>: There is no significant correlation between the possession of a postsecondary education degree by police officers and supervisory ratings of management skills.

H4<sub>a</sub>: There is a significant positive correlation between the possession of a postsecondary education degree by police officers and supervisory ratings of management skills.

To address these hypotheses, four point-biserial Pearson correlation analyses (two-tailed) were conducted using the procedures described in Chapter 3. The dichotomous education variable was compared to mean performance ratings for the four performance categories of interest: general professionalism, productivity, technical knowledge, and management skills.

For Research Question 1, the data revealed there was an insignificant positive correlation ( $r = .102, p = .144$ ) between the possession of a postsecondary education degree by police

officers and supervisory ratings of professionalism for the research sample. Therefore, there was evidence to fail to reject the null hypothesis.

For Research Question 2, the data revealed there was an insignificant positive correlation ( $r = .121, p = .082$ ) between the possession of a postsecondary education degree by police officers and supervisory ratings of productivity for the research sample. Therefore, there was evidence to fail to reject the null hypothesis.

For Research Question 3, the data revealed there was a significant positive correlation ( $r = .172, p = .014$ ) between the possession of a postsecondary education degree by police officers and supervisory ratings of technical knowledge for the research sample. Therefore, there was evidence to reject the null hypothesis.

For Research Question 4, the data revealed there was a significant positive correlation ( $r = .146, p = .036$ ) between the possession of a postsecondary education degree by police officers and supervisory ratings of management skills for the research sample. Therefore, there was evidence to reject the null hypothesis.

### **Interpretation of Findings**

The results of this study were consistent with much of the literature discussed in the literature review. Namely, the data for this study revealed mixed and inconclusive results when examining the relationship between police officer education and performance in the study sample. No significant relationship was revealed between police officer education and supervisory evaluations of professionalism and productivity. Positive correlations between education and performance in the categories of technical knowledge and management skills found in the study sample were weak, providing limited evidence of a relationship. Because performance data was sourced from supervisory performance evaluations at the study site, the

results reflect supervisory perceptions about the performance of nonsupervisory police officers to generally be independent of or only weakly correlated with the education level of the police officers being evaluated.

The theoretical framework for this study, discussed in Chapter 2, incorporated principles of Knowles's (1984) theory of andragogy and Perry's (1999) cognitive development theory. Andragogical principles, including adults being self-directed learners, relating learning to their social role, relating learning to life experiences, and applying learning to problems of practice were shown to be relevant to critical police officer characteristics and skills. Perry's cognitive development processes during postsecondary education were also related to the development of skills well suited for the challenges of modern policing. This study existed in a theoretical framework where education level is an independent variable upon which various performance measures, including supervisory performance evaluation measures, are dependent. The study's findings partially supported this framework with respect to technical knowledge and management skills as defined by the study's supervisory evaluation instrument.

The skills in the categories of technical knowledge as introduced in the supervisory evaluation instrument (Appendix A) and defined in the instrument's documentation (Appendix B) include the ability to master role-specific training and education, adapting previous learning to new situations, making effective decisions, and understanding the effects of these decisions on others. The skills in the category of management include the ability to perform self-directed work without close supervision, being self-motivated, displaying emotional maturity with positional authority, and the ability to make rational decisions. Both andragogy and cognitive learning theory support postsecondary education as a means to improve these specific skills (Knowles, 1984; Perry, 1999).



This study's findings showing police officer education to be positively correlated with some, but not all supervisory measures of performance were consistent with other similar studies found in the literature (Smith & Aamodt, 1997; Truxillo et al., 1998). Smith and Aamodt discovered more evidence of a relationship between education and performance than this study, showing education to be positively correlated with most measures of performance including overall performance. Truxillo et al. (1998), in contrast, found fewer relationships between education and performance than this study, with the only comparable positive correlation being between education and supervisory ratings of job knowledge. This study refuted the findings of Henson et al. (2010), who found no relationships between education and supervisory ratings of performance in Cincinnati. The studies conducted by these authors were the closest in methodology to this study due to their use of supervisory performance ratings as measures of police officer performance.

The demographic data extracted during this study's data collection process revealed police officers in the study sample to be generally more highly educated than the general population of workers, including other police officers, in the United States. The relatively small number of police officers without a postsecondary degree in the study sample may be reflective of the agency's post-2000 emphasis on recruiting more highly educated personnel, as discussed in Chapter 1. This disparity had the potential to influence the study, providing fewer personnel without a postsecondary degree for comparison in the correlation analyses. The police officers without a degree were more likely to be hired prior to the agency's period of emphasis on degree attainment, giving them more experience and potentially introducing age and years of service as confounding variables. For these reasons, it is possible the variable of education was less

influential for this research sample than anticipated and other, unidentified variables were responsible for differences in performance.

## **Conclusions**

The data analyzed in this study provided no definitive answers about the relationship between police officer education and performance in the study sample. The agency of interest in this study placed an emphasis on the possession of a postsecondary education degree in the hiring and promotion processes in the years prior to the three-year period covered by this study (2013–2015). The data extracted in this study demonstrated the results of this emphasis, showing this agency exceeds postsecondary education degree attainment rates for police officers and the general population of workers in the United States. This study contributed additional data to the growing body of research examining the relationship between police officer education and performance.

## **Limitations of the Study**

This study was limited to one medium-sized law enforcement agency in the state of Tennessee. The sample consisted of 85 police officers employed in a nonsupervisory patrol capacity. The lack of standardization of supervisory evaluation instruments across multiple law enforcement agencies in Tennessee required restricting the focus of the study to one agency. The scope of the study likely limited the generalizability of the findings to other law enforcement agencies beyond the study site.

This study was limited to one method of measuring police officer performance: supervisory performance evaluations. Other methods of performance appraisal, including examinations of academy performance, the use of force, disciplinary actions, proactive performance statistics, and self-ratings of performance were discussed in the context of the

literature review but were not used for this study due to a lack of available data or an insufficient amount of relevant data for the sample size.

The validity and reliability of the supervisory evaluation instrument (Appendix A) used in this study was discussed in Chapter 3. While this instrument was representative of police evaluation instruments generally found to be reliable and valid in the literature, the instrument had not been updated for over 10 years at the conclusion of the period of interest for the study (2013–2015). Issues unique to modern policing, including those found in the President’s Task Force on 21st Century Policing (2015) report discussed in Chapter 2, may not have been reflected in the evaluations used in the study sample. An updated evaluation instrument reflecting skills required in both traditional and modern policing may have revealed different results in the correlation analyses. The municipality under examination transitioned to an electronic evaluation instrument containing different performance categories in 2016 and continued to refine and update evaluation categories for 2017, making a comparative analysis with more recent data not possible.

### **Recommendations**

Law enforcement executives, including those at the agency under examination in this study, will continue to be tasked with the responsibility of setting appropriate entry level education requirements for police officers. Chapter 2’s literature review revealed the need for additional studies about the relationship between police officer education and performance to inform the decisions of these executives. Additional research is recommended at this study site as well as in diverse geographic settings across the United States.

Executives at this study’s agency of interest should consider regular reexaminations of the supervisory performance evaluation to continue to reflect the changing skillset required of

police officers in the 21st century. In addition to emphasizing advanced training and education for police officers, the President's Task Force on 21st Century Policing (2015) report emphasized building trust and legitimacy on both sides of the police–citizen relationship and incorporating policies and oversight reflective of community values. This report may form the foundation for additional skill categories to be measured in future performance evaluations. A replication of this study after a stable and modernized method of police officer evaluation is developed may provide further valuable information about the value of the agency's continued emphasis on hiring and promoting highly educated police officers.

This study was limited to a sample of 206 performance evaluations from 85 police officers in one law enforcement agency. Because supervisory performance evaluations differ between most law enforcement agencies, the inclusion of more than one agency for this study was not possible. This potentially limited the generalizability of the findings to other law enforcement agencies with similar characteristics and serving similar populations as this study's agency of interest. Future researchers should consider this limitation and improve the generalizability of results by studying metropolitan or state-wide law enforcement agencies with a significantly larger and more diverse police officer sample. Future studies should also concentrate on law enforcement agencies with diverse educational hiring and promotional policies, including those who have hired and retained a significantly smaller percentage of postsecondary educated police officers than the agency under examination in this study. Future researchers studying larger and more diverse law enforcement agencies may be able to control for many of the potential confounding variables identified in this study.

This study raised ethical implications for future researchers wishing to examine education data and supervisory performance evaluations. While all data used in this study were open

records as defined by Tennessee statutes (T.C.A. § 10-7-503, 2016), open records laws may vary significantly by state. Researchers should take these differences into consideration when developing their records request and informed consent procedures. Future researchers should consider the ethical implications of their position, if applicable, within the law enforcement agency under examination. Despite the open nature of these records in Tennessee, the researcher's position as a supervisor within the agency of interest raised concerns about the potential to misuse data from police officer personnel records and necessitated the use of a passive informed consent procedure, as detailed in Chapter 3. While no police officers elected to opt out of this study, future researchers need to determine if their sample size is sufficient to address their research questions should a portion of the sample be lost due to a failure to gain consent to participate.

Finally, future researchers may wish to consider different methodologies to address the education–performance relationship. This study disregarded the existing qualitative data in the form of supervisor comments on performance evaluations for reasons described in Chapter 3. Future researchers may wish to incorporate qualitative data found on existing supervisory performance evaluations or sourced directly from police supervisors. The inclusion of these data in a qualitative or mixed-methods study may serve to reveal police officer performance characteristics found to be important by supervisors but not included on existing performance evaluations based on numerical ratings. Including qualitative interview or survey data directly from the police officers being rated may also provide additional insight into their perceptions about the fairness of supervisory evaluations as a true measure of their performance.

### **Implications for Leadership**

This study is significant to leaders in the law enforcement agency under examination, as it revealed the results of efforts to recruit and retain a more highly educated workforce. Agency executives have been provided with evidence of the higher level of education of their police officers when compared to other police officers and workers generally in the United States. These executives have also been provided with limited evidence of a positive correlation between this level of education and supervisory performance ratings of technical knowledge and management skills. While not conclusive, these results support other literature-based evidence of a positive relationship between police officer education and performance (Smith & Aamodt, 1997; Truxillo et al., 1998) and provide the basis for a continuation of the policy of recruiting and promoting police officers with postsecondary degrees.

Implementing the recommendations of this study and continuing to assess the relationship between police officer education and performance has potential benefits for leaders of law enforcement agencies and society in general. Law enforcement leaders, responsible for setting educational hiring criteria, may gain a better understanding on how to effectively allocate their resources to ensure the recruitment and retention of highly qualified police officers who will provide the best level of service to the public. The public will benefit by receiving the best possible return for their investment of tax funds in their law enforcement agencies. This level of understanding has the potential to create a cyclical benefit for law enforcement leaders, both elected and appointed, as the public gains increased trust in their performance and an increased investment in their continued leadership.

## **Chapter Summary**

Chapter 5 presented an overview of previous chapters in this study. The problem examined in this study, the purpose of this study, and the methods used to address this study's research questions and hypotheses were summarized. This study revealed no significant relationship between police officer education and supervisory evaluations of professionalism and productivity in the study sample. Positive correlations found between education and performance in the categories of technical knowledge and management skills were weak, providing limited evidence of a relationship. These inconclusive results were consistent with many of the studies discussed in the literature review.

This chapter discussed the limitations of this study's data analyses in the context of the study's research questions, the existing literature, and the theoretical framework guiding the study. Because the study was limited to one medium-sized municipal law enforcement agency in the state of Tennessee, the generalizability of this study's results was also limited. Despite the limited generalizability, this study examined data from a geographical setting unique from existing research and contributed to the growing body of research examining the relationship between police officer education and performance.

Because law enforcement executives will continue to be tasked with setting appropriate educational requirements in the hiring process, further research examining the education–performance relationship in policing was recommended. This chapter provided specific recommendations for future researchers wishing to contribute to the growing body of research in this area. A better understanding of the relationship between police officer education and performance has implications for law enforcement leaders desiring to allocate their resources most effectively to provide the highest level of service to the public.

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## Appendix A: Supervisory Evaluation

Name:	Template: <b>Eval-20</b>
Position and Dept.	
Rater:	

**EVAL-20**

<b>General Professionalism</b>	
Dependability	
Cooperation and Teamwork	
Positive Attitude and Enthusiasm	
Personal Accountability	
Relationship with Supervisor(s)	
Relationship with Peers	
Interpersonal Skills (including diplomacy & tact)	
Attitude about Performance	
Flexibility / Adaptability	
<b>Productivity</b>	
Initiative and Work Ethic	
Recognizing and Avoiding Unnecessary Problems	
Aligning Efforts with Goals of Department	
Pro-active Enforcement	
Punctuality	
<b>Technical Knowledge</b>	
Adequate Technical Skills	
Relevant Organization Policies	
Situational adaptability	
How Area Relates to Others	
<b>Management</b>	
Judgment and Common Sense	
Following Officer Safety Practices	
Work Ethic	
Taking Control of Situations When Appropriate	
Emotional Control	
Time Management	

**Grading Guide**

6 Role model! **ALWAYS** (Hard to think of a way to improve!)

5 Above Expectations **ALMOST ALWAYS** (Truly demonstrates extraordinary performance)

3.5 - 4 Meets Expectations **USUALLY** (Good, solid performance.)

3 Fair to good **OCCASIONALLY** (Needs improvement)

2 Borderline **SELDOM** (Some significant problems here)

1 Serious Problem! **NEVER** (Causing serious or ongoing damage)

An average score of 3.50 is considered "Meets Expectations" for overall performance.

Please add comments about this person's **General Professionalism**.

Please add comments about this person's **Productivity**.

Please add comments about this person's **Technical Knowledge and Skills**.

Please add comments about this person's **Management**.

<u>Signatures</u> <u>Prior to Review with Employee:</u>	<b>Please add general comments about this person's Overall Performance.</b>
1. Rater _____ Date _____ 2. Supervisor _____ Date _____ 3. Supervisor _____ Date _____ 4. Department Head _____ Date _____ 5. Asst. City Adm. _____ Date _____ 6. Deputy City Adm. _____ Date _____ 7. Human Resources Director _____ Date _____ 8. City Adm. _____ Date _____	1. In what areas are they very strong? Where have they shown significant improvement? 2. In what areas should they focus their next efforts at professional development? 3. List goals for next review period.
<u>Review with Employee</u> 1. Person Being Rated _____ Date _____ 2. Rater _____ Date _____	
Employee should check here _____ if he/she intends to submit an appeal to this evaluation. Appeal should be attached to evaluation and forwarded to Human Resources Department.	

## Appendix B: Supervisory Evaluation Scoring Guide

Sub-Category	Definition
Dependability	Follows through on assignments/commitments; meets deadlines and schedules; completes work according to procedures and guidelines; does not require much followup supervision to ensure responsibilities are finished on time and well; has good attendance.
Cooperation and Teamwork	Respects the role of his/her own tasks within the bigger picture; works for good of all, not just own immediate agenda; seeks solutions to problems and works with others in a way that makes success more likely for everyone; offers to assist others when possible.
Positive Attitude and Enthusiasm	Focuses on positive side of things; avoids complaining and general negativity; is excited about work.
Personal Accountability	Willing to answer for own actions/outcomes; takes responsibility for mistakes rather than making excuses or shifting blame elsewhere.
Relationship with Supervisor(s)	Respects supervisor. Avoids behavior that would undermine role of supervisor. Is open to constructive criticism.
Relationship with Peers	Cooperates with and supports colleagues. Remains willing to help others when needed. Practices communication and cooperation. Interacts effectively with peers.
Interpersonal Skills (including diplomacy & tact)	Communicates respect for diversity/opinion of others. Gets along well with a wide variety of people. Is able to disagree without damaging relationships. Fosters consensus among competing stakeholders.
Attitude about Performance	Consistently demonstrates an effort to improve performance.
Flexibility / Adaptability	Adjusts to necessary changes. Supports targeted organizational initiatives. Remains productive in midst of change.
Initiative and Work Ethic	Self-starting/hard-working, even when not being supervised. Uses own motivation to look for ways to improve quality and productivity.
Recognizing and Avoiding Unnecessary Problems	Sees problems developing in early stages and addresses them promptly and effectively.
Aligning Efforts with Goals of Department	Supports Police Department by ensuring goals and objectives are met.

Sub-Category	Definition
Pro-active Enforcement	Engages in self-initiated traffic stops and crime detection.
Punctuality	Arrives on time; appropriately schedules time off; rarely leaves assigned area without justification.
Adequate Technical Skills	Has mastered the specialized training and skills specific to his/her own role. Has adequate understanding of the technical demands and skills of all areas; maintains professional licenses or certifications.
Relevant Organization Policies	Remains aware of and follows the organizational policies and protocols that guide the work of the department and its relationship with others (e.g., safety, hiring, evaluation, discipline, budgeting, etc.)
Situational adaptability	Effectively transfers previous learning into new situations.
How Area Relates to Others	Understands and is respectful of the impact his/her performance and decision-making has on other employees and customers.
Judgment and Common Sense	Recognizes the future effects of current decisions. Understands how to prioritize competing demands.
Following Officer Safety Practices	Follows departmental general orders.
Work Ethic	Self-starting/hard-working, even when not being supervised. Uses own motivation to look for ways to improve quality and productivity.
Taking Control of Situations When Appropriate	Effectively asserts necessary authority with people and situations that resolve issues or calls for service, avoiding unnecessary provocations or confrontations, while respecting legal and civil rights under law and human dignity.
Emotional Control	Is able to maintain rational and objective actions when experiencing strong internal emotions.
Time Management	Uses processes and tools, such as goal setting, planning, prioritizing, decision making, and scheduling, to increase efficiency and productivity.

## Appendix C: Informed Consent Document

### American College of Education

#### Informed Consent for Research Participation

Consent to participate in this study of police officers is “passive” meaning you do not have to sign anything or do anything to be a volunteer participant. Police personnel records, including supervisory performance evaluations and evidence of postsecondary education, are open for public inspection per Tennessee Code Annotated (T.C.A. § 10-7-503). This statute also requires personnel whose records have been inspected to be notified within three (3) days of access by the records custodian (Human Resources). This notice includes who inspected these records, contact information for the person inspecting these records, and when the records were inspected. The home and personal telephone numbers, personal addresses, financial account information, social security numbers, driver license information, emergency contact information, and personal e-mail addresses of police officers and their family/household members are deemed confidential, per state law (T.C.A. § 10-7-504), and will not be collected or used by the researcher in this study. No consent is required by law to access the nonconfidential portion of these records, but the researcher wants prospective participants to be fully informed and given the opportunity to opt out. The following paragraphs describe the research.

Research Title: A correlational study examining the relationship between police officer education and supervisory evaluations of performance in a medium-sized law enforcement agency in Tennessee.	
Principal Researcher: Matthew Smalley Dissertation Chair: Crystal Neumann, DBA	Organization: American College of Education
E-mail: [REDACTED]@gmail.com	Telephone: [REDACTED]

#### Introduction

You are invited to take part in a research study examining the relationship between police officer education and performance. This document is part of the informed consent process. The information included will enable you to consider the purpose, design, and procedures of the study before deciding if you want to take part. This research has been approved by ACE administration and the Institutional Review Board (IRB) responsible for protecting participants at ACE. All colleges and universities are required by law to have an IRB that reviews all research involving human participants.

#### Recipients

If you received this document, you were employed by the agency of interest in this study as a nonsupervisory police officer for all or a portion of the time period of 2013–2015. All police officers in this time period are being asked to allow numeric performance ratings data and educational attainment data used for this study. Your identity and the name of your employing agency will be known to the lead researcher only. No personally identifying information will be included in the final research report (doctoral dissertation).

### **Research Team and Roles**

Lead researcher Matthew Smalley is a doctoral candidate at the American College of Education. He is conducting this study to complete a dissertation in partial fulfillment of the requirements for the degree of Doctor of Education. To gather data for this study, he will personally inspect public personnel files in the Human Resources department of the municipality of interest, recording only supervisory performance evaluation scores and the education level of participants. De-identified data will be stored in password-protected cloud storage accessible only to him. Dr. Crystal Neumann is serving as the Dissertation Chair for this study.

### **Purpose of the Research**

The research purpose is to determine the degree to which the possession of a postsecondary education degree is correlated with measures of police officer job performance. Conclusions will provide the basis for recommendations to executives in the law enforcement agency of interest about establishing appropriate educational hiring criteria. This study also aims to contribute to the larger body of knowledge about the relationship between police officer education and performance.

### **Research Questions**

1. What degree of correlation, if any, exists between the possession of a postsecondary education degree by police officers and supervisory ratings of professionalism?
2. What degree of correlation, if any, exists between the possession of a postsecondary education degree by police officers and supervisory ratings of productivity?
3. What degree of correlation, if any, exists between the possession of a postsecondary education degree by police officers and supervisory ratings of technical knowledge?
4. What degree of correlation, if any, exists the possession of a postsecondary education degree by police officers and supervisory ratings of management skills?

### **Brief description of study design and procedures**

The study will use a quantitative correlational design. The mean supervisory performance scores for each of the four performance categories described in the research questions will be collected and calculated from public personnel files. Evidence of postsecondary education in the form of conferred degree transcripts will be used to create a dichotomous measure of education ("Degree" or "No Degree"). A correlation analysis will reveal statistically significant correlations between performance and education. The results of these statistical analyses will be used to address the research questions.

### **Participant Selection**

Participants will be selected from those police officers employed by the law enforcement agency of interest in a nonsupervisory capacity for all or part of the time period of 2013–2015.

### **Voluntary Participation and Confidentiality**

Participation in this study is voluntary for police officers meeting the aforementioned criteria. If you initially decide to have your de-identified work included in the study, you can change your mind at any point. Any information obtained from public personnel records will be kept strictly confidential by the lead researcher. The lead researcher will not use information obtained for any purposes outside of this research. The lead researcher will not release collected data to any 3<sup>rd</sup> party. All collected data will be kept in password-protected cloud storage accessible only to the lead researcher via a personal computer. Statistical analyses will be carried out on this computer also. The data files will substitute participant numbers for names and only the researcher will have a list of names and assigned numbers.

Any citizen of Tennessee wishing to examine the same data must do so using the same procedures for accessing public records as the lead researcher, per T.C.A. § 10-7-503

### **Risks and Benefits**

Given the plan to conceal the identity of police officer participants and their employing law enforcement agency, to use participant numbers in place of names in data files, and to keep rosters, lists, data files, and statistical analyses on a personal computer inaccessible to any party other than the lead researcher, the risk to participants is small. Citizens of Tennessee wishing to review the same data as the lead researcher must use the same public records request procedures, per T.C.A. § 10-7-503. Law enforcement executives and scholars in the field of criminal justice education may gain additional insight into the relationship between police officer education and performance from this research. Executives will potentially be able to make more informed decisions when establishing educational hiring criteria. Should the data support a positive relationship between police officer education and performance, a more educated and better trained law enforcement workforce may result. Society may benefit by receiving better police services.

### **Reimbursements**

Police officers will not be reimbursed since their participation will be passive.

### **Sharing the Results**

All ACE students, faculty, administrators, and study participants will have access to the results through a research report (doctoral dissertation).

### **Who to Contact**

If you have any questions, contact the lead researcher, Matthew Smalley, at [REDACTED] or at [REDACTED]@gmail.com. If there are study-related issues or concerns you would prefer to discuss with the Dissertation Chair, please contact Dr. Crystal Neumann at Crystal.Neumann@ace.edu.

**Review for the Protection of Participants:** This research study has been reviewed and approved by the ACE Institutional Review Board (IRB). The ACE IRB can be contacted by e-mailing Dr. Kathryn Talley at kathryn.talley@ace.edu.

### **Research Participants' Rights:**

Your signature below indicates that you have read or had read to you the information above, and you confirm all of the following:

- Matthew Smalley has explained the study to your satisfaction and answered all questions. You have been told the possible benefits and the potential risks and/or discomforts of the study.
- You understand that you do not have to take part in this study, and your refusal to participate or your decision to withdraw will involve no penalty or loss of rights or benefits. The study personnel may choose to stop your participation at any time.
- You understand why the study is being conducted and how it will be performed.
- You understand your rights as a research participant and you deny consent to participate in this study.
- You have been told you will receive a copy of this form.

**Certificate of Non-Consent to Participate**

Sign, scan, and return to [REDACTED]@gmail.com if you  
choose not to participate in the research.

I have read the information about this police officer education and performance study, or it has been read to me. I understand what the study is about and the nature of my participation as a volunteer. I have had the opportunity to ask questions, and the questions have been answered to my satisfaction. I am **voluntarily declining** the opportunity to participate in this study and thus **denying consent**.

Print or Type Name of Police Officer:

Signature of Officer: \_\_\_\_\_ Date: \_\_\_\_\_

I confirm that the police officer and prospective participant was given an opportunity to ask questions about the study, and all the questions have been answered to the best of my ability. I confirm that the individual was not pressured to give consent, and that the decision not to consent was made freely and voluntarily.

A copy of this Non-Consent Form has been provided to the participant.

Print or type name of researcher: Matthew Smalley

Signature of researcher:  Date: 12/7/2017