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**IDENTIFYING FACTORS THAT INFLUENCE THE CONTINUING
EDUCATION CHOICES OF MUNICIPAL POLICE OFFICERS**

BY

SEAN O'CONNOR

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**Submitted in Partial Fulfillment
of the Requirements for the Degree
Doctor of Education
Seton Hall University**

2019

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ENRICHING THE MIND,
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COLLEGE OF EDUCATION AND HUMAN SERVICES
DEPARTMENT OF EDUCATION LEADERSHIP MANAGEMENT & POLICY

APPROVAL FOR SUCCESSFUL DEFENSE

Sean O'Connor, has successfully defended and made the required modifications to the text of the doctoral dissertation for the. during this **Summer Semester 2019**.

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The mentor and any other committee members who wish to review revisions will sign and date this document only when revisions have been completed. Please return this form to the Office of Graduate Studies, where it will be placed in the candidate's file and submit a copy with your final dissertation to be bound as page number two.

ABSTRACT

This study was conducted in an attempt to identify factors that influence the continuing education choices of municipal police officers. By examining factors such as tuition reimbursement, educational incentive pay, CEO education level, higher education standards for promotion and hiring, rank, and length of service, policy recommendations can be made to positively impact education levels among municipal police officers. In phase one of analysis, levels of organizational education were presented along with each variable's presence in each department. Aggregate data is provided to give the reader an overview of higher education incentives and attainment within the County. In phase two, data related to officers education levels (current and upon hiring) was used to conduct a binary logistic regression, which shed light on how independent predictor variables influenced the officers who continued their education during their employment and those who did not. These sub groups were then compared to several independent variables which may or may not influence continuing education. Each factor's influence was determined using binary logistic regression. Factors positively influencing continuing education in municipal police officers were identified, while controlling for other variables, and recommendations were made regarding best practices for creating an environment that facilitates continuing education.

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I would like to begin by thanking my parents Ken and Monica. They gave me everything I ever needed, including the confidence to know that I could accomplish anything I set my mind to. They have done more for me over the years than I care to admit, and I could not have achieved what I have without their undying support.

I would like to thank my beautiful wife Colleen who had to endure this long process with me. I know this hasn't been easy for her, and she never complained about the stress or financial burden this endeavor created. She was (mostly) patient and supportive while I was under a high degree of pressure. I couldn't have asked for a better partner.

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DEDICATION

This dissertation is dedicated to my children, Maeve and Sean. This achievement would mean nothing without you. I did not earn this degree for myself. I earned it to set an example for you both so that you may aspire to do great things. Anything is achievable through hard work and sustained effort. I am certain that you will both become more than I ever could have dreamt of being. I am so proud of you!

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CHAPTER I: INTRODUCTION

In a democratic society, police authority is derived from the consent of the population. Effective policing requires the support of the public. In order to garner this support, policing must be professionalized, and incidents of police misconduct must be kept to a minimum. According to polling data collected between 1977 and 2001, highly publicized events of police misconduct negatively influence citizens' perceptions of the police (Weitzer, 2002). In the current age of information technology, it has become increasingly difficult to increase trust between the police and community. Highly publicized incidents such as those in Ferguson, Missouri, or Baltimore Maryland increase transparency in policing; however, they also present challenges because police are scrutinized for their actions under demanding circumstances (Jackson, 2015). The public favors transparency in policing, and is supportive of initiatives mandating body camera usage by police officers. A study conducted by Sousa et al. (2017) found that 84.8% of people supported body cameras for police and 91.3% felt body-worn cameras increase transparency. Research has shown they are not as confident that body cameras can improve police community relations (Sousa et al., 2017).

Police officers must possess not only effective communication skills and legal expertise but also critical thinking, and problem solving skills in order to be proficient in policing (Birzer and Tannehill, 2001). Higher education may offer some benefits in this area because college experience improves critical thinking skills (Terenzini, 1993). In addition, college-educated employees outperform high school educated individuals when both hold the same job (Pascarella and Terenzini, 2005).

Studies investigating the effects of higher education in law enforcement have found that it increases levels of professionalism in police officers. Creativity and critical thinking are among the benefits of higher education, and are of particular value to police officers (Paterson, 2011). This is evident in how officers with higher education levels handle scenarios where physical, chemical, or deadly force may be warranted. A more educated officer is significantly less likely to use force than a non-college-educated officer (Rydberg, 2010). Higher education levels have a positive impact on reducing substantiated internal affairs complaints (Hoptay, 2007). Police officers who have attained bachelor's degrees are less likely to tolerate abuses of authority (Telep, 2011). All of these factors suggest that higher education promotes professionalism among police officers.

Negative public perceptions hinder effective law enforcement. In order to reduce negative public perception, police must be viewed as professionals. Increasing the number of officers with college degrees is a pathway to professionalism; however, only 1.9% of municipal law enforcement agencies nationwide required a 4-year degree for employment in 2013 (Bureau of Justice Statistics, 2015). There is a slowly increasing trend requiring a college degree for employment in municipal law enforcement. In 1993, 1.4% of agencies required 4-year degrees, and in 2003, 1.7% required college degrees (Bureau of Justice Statistics, 2015).

Christine Gardiner conducted a comprehensive assessment of higher education in policing in conjunction with California State University entitled Policing around the Nation: Education, Philosophy, and Practice. This research was intended to provide access to hitherto unavailable information related to education levels in law enforcement.

Nationwide, 30.2% of officers have a four-year college degree (Gardiner, 2017).

College degrees warrant higher salaries that some agencies are unwilling to pay when they have the option of hiring officers without a degrees. College degree requirements also shrink the applicant pool by limiting the number of qualified people. (Gardiner, 2017). If agencies are not prioritizing the hiring of college-educated officers, then continuing education and incentives are even more important. For officers seeking promotion, higher educational standards are more common, with 3.2% requiring a college degree for sergeant, 13.5% for lieutenant, 22.9% for command staff (executive level managers), and 35.9% for chief/sheriff (Gardiner, 2017). 55.8% of agencies offer at least one incentive (i.e., programs designed to encourage officers to continue education) to pursue higher education.

Incentive programs were identified based on the 2017 Gardiner study, and include the following: Tuition reimbursement, educational pay incentive, flexible shifts, use of department vehicle for school, permission to attend class during work hours, schedule preferences to accommodate college schedule, and accelerated career ladders for college-educated officers.

This study focuses on continuing education choices made by officers in New Jersey. Officers in New Jersey rank 2nd in the country in terms of education, with 46.1% holding a 4-year degree, following Massachusetts' 49.0% (Gardiner, 2017). This is not surprising because 68.9% of agencies in the north east offer incentives for continuing education (Gardiner, 2017). Despite research demonstrating the benefits of higher education for law enforcement officers and the agencies they represent, many officers still do not have college degrees. In order to continue to professionalize law

enforcement, it is necessary to increase the level of education of police officers. The New Jersey Civil Service Commission requires a police officer candidate possesses a high school diploma or equivalent (New Jersey Civil Service Commission, 2018), though individual municipalities may require higher standards. The New Jersey State Police require a 4-year college degree, but consider 60 college credits with 2 years full time work or military experience an acceptable alternative (www.njsp.org). Nationally, 51.8% of officers have a 2-year degree, 30.2% have a 4-year degree, and 5.4% have a graduate degree. In New Jersey, 55.7% have at least a two-year degree, 46.1% have 4-year degrees, and 13.6% have master's degrees (Gardiner, 2017).

New Jersey is comprised of twenty-one counties that vary in territory, population, and per capita income. The least populated county is Salem, with a population of 66,083 and the most populated is Bergen, with a population of 905,116. Hunterdon County, which is the focus of this study, is ranked 18th in population at 128,349 and has a population density of 298.49 per square mile which is 19th in New Jersey (2017 Census Estimate). As of 2016, Hunterdon County had a per capita income of \$82,109, ranking third in New Jersey and 26th out of 3,113 counties in the United States (New Jersey Dept. of Labor and Workforce Development, 2016). Hunterdon County is most easily compared to Sussex and Warren Counties in terms of population and population density; however, its per capita income is more on par with those of Morris, Somerset, and Bergen Counties (New Jersey Dept. of Labor and Workforce Development, 2016). Hunterdon County New Jersey stands out from other counties nation-wide due to its rural topography and close proximity to the two major metropolitan cities of New York and Philadelphia.

Problem Statement

The challenge is to identify factors that influence continuing higher education for law enforcement. Incentives vary by department, and include merit pay, and tuition reimbursement, as well as additional consideration for promotion and special assignment. An incentive refers to any practice designed to encourage officers to continue their education. The population of interest in this study includes the municipal law enforcement agencies of Hunterdon County, New Jersey. Hunterdon County New Jersey consists of 26 municipalities with 14 police departments, 12 of which are full time, and two of which are part time. The remaining municipalities are covered by the New Jersey State Police and are not included in this study. The 2017 Gardiner study offered insight into the educational make up of policing nationwide, although it focused on aggregate data. This research will focus on a smaller group with a distinct emphasis on identifying factors that influence continuing education. This research is most usefully restricted to small municipal law enforcement agencies such as those in Hunterdon County New Jersey because they are responsible for all law enforcement activities within their jurisdictions, and they lack layers of administration and specialization, concentrating more responsibility on individual officers (Falcone and Wells, 1995). These officers must rely upon themselves to be proficient in all aspects of policing because these the limited administrative oversight of these agencies prevents the thorough review of actions taken in the line of duty. While many aspects of police professionalism have been studied, there is no prior research on factors influencing continuing education of police officers in small rural police departments. Thus, the population investigated in this study

is unique because it functions differently than those in urban and suburban police agencies.

Purpose Statement

The purpose of this study is to determine whether there are factors influencing police officers' pursuit of higher education, and establish best practices to ensure a better educated police department. The study will examine department policies related to education incentives such as tuition reimbursement, educational pay incentive, flexible shifts, use of department vehicle for school, permission to attend class during work hours, schedule preferences to accommodate college schedule, and accelerated career ladders for college-educated officers. The specific policies examined will depend on what incentives are currently being offered within the county. As previously stated, 55.8% of agencies nationwide offer at least one educational incentive while 68.9% of agencies in the north-east offer such incentives (Gardiner, 2017). The study intends to establish a relationship between departmental policies which incentivize education, and the continuing education choices of officers. Incentive programs were identified based on the 2017 Gardiner study, and include the following: Tuition reimbursement, educational pay incentive, flexible shifts, use of department vehicle for school, permission to attend class during work hours, schedule preferences to accommodate college schedule, and accelerated career ladders for college-educated officers. Of course, each incentive has characteristics unique to the agency administering the program. Variables such as amount of incentive pay, which classes are reimbursed, flexibility of shifts, amount of work time given for college, and priority placed on higher education for career advancement will be examined in the hopes of providing a previously unavailable

snapshot of factors that influence continuing education choices. Level of education at each rank will also be compared to determine whether career advancement is a factor in continuing one's education. For the purpose of this study, the rank categories analyzed include police officer, front line supervisor, middle manager, and executive. These categories are used in lieu of actual rank (officer, sergeant, lieutenant, captain, or chief) because of inconsistency in the duties and responsibilities associated with ranks across various departments. For example, in some departments within Hunterdon County, a lieutenant may be the officer in charge (executive), whereas in a larger department, a lieutenant may be a mid-level manager. This study aims to identify whether there are factors that influence officers' in their decision to continue their education. In determining whether any correlations exist, we can establish best practices to be used as a guideline for other police departments who wish to encourage officers to pursue higher education.

Significance of Study

Policing as a profession has evolved from a role of preserving law and order to a complex field where officers must be cross trained in many complex areas to deal with increasing societal demands. Police officers are often forced to make momentary decisions in life or death situations, and there is a growing need for analytical decision makers in the field to keep up with the profession's evolving demands. In modern times, police officers are called upon not only to investigate traditional crimes, but also to engage in analytical thinking as they develop policing strategies in partnership with the community. These partnerships lead to social control, and ultimately make neighborhoods safer (Reisig, 2010).

Although police officers of all ranks benefit from having a college education, many departments avoid the requirement of a degree because it drastically reduces the size of the applicant pool (Gardiner, 2017). There are many factors to consider when determining who is most qualified to hold a law enforcement position, such as character, integrity, verbal communication skills, as well as medical and psychological profile. By limiting the pool of applicants to those with college degrees, many agencies have difficulty meeting other requirements.

If there are obstacles to hiring college graduates, it is important for officers to seek higher education while employed as police officers. Because the benefits of a more educated police force are shared by the individual and the employer, it is logical for the employer to incentivize higher education for officers. If an employer invests resources, they typically aim for a maximal return on investment. In this case, the investment is incentives provided for officers to further their education, and the return is increased job performance and productivity.

The data collected in this study will be analyzed in two phases. Phase one of data analysis will be organizational. Data will be gathered to establish a picture of education levels within individual departments, as well as any factors that may influence continuing education of police officers in that department. Phase one of this research will provide data showing how different agencies incentivize higher education. Based upon these policies and the education levels of agencies offering them, an assessment will be conducted to determine whether the existing incentives are effective. Other factors such as chief executive level of education, educational standards for hiring, educational

standards for promotion, length of service, and rank will also be examined to gain a broader perspective on factors influencing education levels within police departments.

Research Questions: Organizational Analysis

- What are the different levels of education in Hunterdon County police departments?
- What educational incentives are offered in Hunterdon County police departments?
- How do education incentives offered by rural police agencies in Hunterdon County, NJ influence the level of education of police departments?
- How does the education level of the chief executive officer of rural police agencies in Hunterdon County, NJ influence the level of education of officers within a police department?
- How do educational standards for hiring influence the level of education in a police department in rural Hunterdon County, NJ?
- How do educational standards for promotion influence the level of education within a police department in rural Hunterdon County, NJ?

Sub-questions

- How many agencies offer at least one incentive?
- How many agencies offer multiple incentives?
- How many agencies offer no incentives?
- How many agencies have a college-educated CEO?
- How many agencies require college for initial employment?
- How many agencies require college for promotion?

The second phase of analysis will be conducted on an individual level. Data related to each officer will be analyzed to compare officers who continued their education and those who did not continue their education against a variety of factors which may or may not influence the continuing education choices of the officers.

Research Questions: Individual Analysis

- Do education incentives offered by rural police agencies in Hunterdon County, NJ affect the continuing education choices of the police officers?
- Does the level of education of the chief executive officer of rural police agencies in Hunterdon County, NJ influence the continuing education choices of officers within a police department?
- How does length of service influence continuing education choices for municipal police officers in Hunterdon County New Jersey?
- How does rank (expressed as job classification) influence the continuing education choices officers at that specific rank?

Research Hypothesis

Officers who have access to education incentives such as tuition reimbursement and incentive pay will continue their education at rates higher than those officers who do not have access to such programs. In addition, officers who serve in departments with college-educated chief executives are more likely to pursue higher education. I believe tuition reimbursement not only minimizes the financial impact of continuing education, but also shows that the employer is creating a culture where continuing education is encouraged. The culture of encouraging continuing education is further bolstered by a college-educated CEO.

Definition of Terms

Best practice. The most effective means to achieve a desired result.

Municipal police officer. A sworn law enforcement officer who works for a municipality and performs general police duties. This individual has been certified by the New Jersey Police Training Commission.

Patrol Officer. An officer who conducts general police duties without the responsibility of supervising other officers.

Front Line Supervisor. An officer who may conduct general police duties, but is also tasked with supervising and evaluating subordinates.

Middle Manager. This officer is generally tasked with administrative responsibilities, and acts as a second level supervisor while taking direction from command staff

Executive Level Commander. Officers at this level are responsible for shaping the mission and values of the department. He or she is also responsible for writing policy and making necessary changes to existing policy.

Chief executive. This officer is in charge of the department and has the final say in all decision making.

Education Incentive. A reward for the purpose of facilitating continuing education.

Merit pay. A bonus that is paid annually to officers who have obtained a higher degree.

College-educated CEO. Officer in charge of a department who holds at least a bachelor's degree.

Higher degree attainment. An officer has attained a higher degree than he or she held upon hiring. This measure is used to determine if an officer continued their education for the purposes of this study.

Organization of the Study

This dissertation is composed of five chapters. Chapter I provides the background necessary for the formulation of the problem, purpose of the study, and research questions. This chapter also highlights the significance of the study, the limitations. Chapter II contains a review of the relevant literature. Public perception and support of policing, professionalism, benefits of higher education, incentives, police culture, and police department organization are discussed. Discussion of these areas was necessary to place the problem in the appropriate context. Chapter III is devoted to research methodology. The design of the study, and the statistical methods are discussed, as well as data collection and analysis. In this case, the method of analysis was binary logistic regression, which compared a dichotomous dependent variable to a series of independent predictor variables in an effort to determine factors influencing the continuing education choices of police officers. In Chapter IV, the results of quantitative analysis described in Chapter III, and the findings of the study are discussed. Finally, Chapter V provides a conclusion and summary for the study. In addition, suggestions for future research are discussed.

CHAPTER II: LITERATURE REVIEW

The study of motivation to pursue higher education in police officers requires an understanding of why police officers can benefit from higher education. It is also necessary to understand public expectations, and how the public perceives police. Policing is a position of the public trust, and requires public support to function. Examining initiatives such as community-oriented policing, which police agencies have used to elicit confidence and trust, is also helpful to gain an understanding of how police agencies have attempted to become more professional in the past. Exploring the general benefits of higher education also help to establish why it is advantageous for individual police officers and their agencies, and improves public perception. This literature review will also explore publicly available data provided by the municipal police departments of Hunterdon County New Jersey in an effort to assess the general state of police education. This study also draws on Christine Gardiner's (2017) report "Policing around the Nation: Education, Philosophy, and Practice" to gain a better understanding of the current state of police officer education nationwide.

The review of relevant literature that follows is divided into seven sections. Section one will address public perception and support for policing. Section two deals with police professionalism. Section three will explore the benefits of higher education. Section four will discuss education in policing and summarize the data obtained from the municipal police departments of Hunterdon County, NJ. Section five will explore incentives for education in addition to offering a broader perspective of their use in other areas. Section six will review how police agencies are structured, and provide a

background on law enforcement career advancement. Section seven will examine the culture of policing.

Public Perception and Support of Policing

The development of American policing mirrored the first models of policing in England. English common law was the basis for the system, and it relied heavily on volunteer watch groups that supplemented paid constables (Archbold, 2013). Policing became increasingly professionalized by innovators such as August Vollmer. He served as police chief in Berkeley California from 1909 to 1923, and as Los Angeles Police Chief from 1923 to 1924. Vollmer has been called the father of modern law enforcement because he was the first police chief to require college degrees for officers, created the first radio equipped motorized patrol, and implemented new technology such as the lie detector (Bond, 2014).

Throughout history, policing has evolved to meet the needs of the citizenry. Policing is a public service function performed by the government for the good of the people. Finite resources in the form of tax dollars are used to fulfill the mission of policing, and ultimately, taxpayers are the end users of police services. For this reason, public perception and support of policing is essential. The criminal justice system functions due to the consent of the people, and is effective due in large part to public support (Jackson et al., 2009). When considering how to measure public support of policing, it is important to be mindful that people have different attitudes toward the institution of policing, and individuals or events associated with the profession. Easton (1965) discusses a method of analyzing general and specific attitudes toward police. He defines diffuse support as support that “continues independently of the specific reward

which the member may feel he obtains from belonging to the system” (p. 125). Easton (1965) defines specific support as “input to a system that occurs as a return for the specific benefits and advantages that members of a system experience as a part of their membership. It represents or reflects the satisfaction member feels when he perceives his demands as having been met” (p. 125). Support can be influenced by societal factors. Highly publicized incidents of misconduct dramatically increase unfavorable opinions of the police (Weitzer 2002). Allegations of police misconduct in Ferguson Missouri have caused the legitimacy of policing to be questioned nationwide (Wolfe and Nix, 2016). In order to garner public support, police must not only treat the public with dignity and respect, but also typify societal morals and values (Jackson et al., 2007).

Support for police can be viewed in three ways: compliance with laws, cooperation with police, and empowering police through public policy (Sunshine and Tyler, 2003). There are many reasons why people obey the law. Many people feel a normative commitment to do so because those enforcing the law have the ability to dictate behavior (Tyler, 1990). This logic for obeying the law comes from a person’s morals and they feel the law is just. Voluntary compliance with the law is far more likely when the public feels authorities are legitimate (Tyler, 1990). Prior police contact, income level, education, age, and police performance all influence perceptions of police legitimacy and ultimately satisfaction with police services (Hinds and Murphy, 2007). Positive public perceptions of police legitimacy have a positive impact on public cooperation with police (Murphy et al., 2008). People are more likely to trust the police, and to cooperate when they feel the police are fair and impartial (Sunshine and Tyler, 2003). In contrast, individuals who do not regard law enforcement as legitimate distance

themselves from authorities (Murphy and Cherney, 2011). This distancing from authority has a negative impact on cooperation. Discretion, however, can have a positive impact on public cooperation with the police. Policy that allows police to use discretion is one way that trusting citizens have empowered the police (Sunshine and Tyler, 2003). In fact, Sunshine and Tyler (2003) observe that empowerment flows primarily from legitimacy.

Policing often involves involuntary, or police-initiated interaction with citizens. Such interactions have a higher tendency to be perceived as negative (Bureau of Justice Statistics, 2016). To further complicate matters related to perceptions of police officers, race also influences how interactions are perceived. The Bureau of Justice Statistics (2016) has highlighted the following statistics:

Relatively more black drivers (13%) than white (10%) and Hispanic (10%) drivers were pulled over in a traffic stop during their most recent contact with police. There were no statistical differences in the race or Hispanic origin of persons involved in street stops. Persons involved in street stops were less likely (71%) than drivers in traffic stops (88%) to believe that the police behaved properly. Of those involved in traffic and street stops, a smaller percentage of blacks than whites believed the police behaved properly during the stop. Drivers pulled over by an officer of the same race or ethnicity were more likely (83%) than drivers pulled over by an officer of a different race or ethnicity (74%) to believe that the reason for the traffic stop was legitimate. White drivers were both ticketed and searched at lower rates than black and Hispanic drivers. Across race and Hispanic origin, persons who were searched during traffic stops were less

likely than persons who were not searched to believe the police behaved properly during the stop. About 1% of drivers pulled over in traffic stops had physical force used against them by police. Of these drivers, 55% believed the police behaved properly during the stop. About 6 in 10 persons age 16 or older involved in street stops believed they were stopped for a legitimate reason. About 19% of persons involved in street stops were searched or frisked by police. The majority of persons who were searched or frisked did not believe the police had a legitimate reason for the search (p.1).

In an effort to improve public perception, many police agencies engage in community-oriented policing, where officers address community issues in partnership with citizens. Community policing broadly expanded the scope of responsibility for police officers who were traditionally trained to patrol, investigate, maintain order, and write reports (Stone and DeLuca, 1985; Walker, 1992). This expansion of services charged officers with the responsibility to proactively develop relationships with community members, and solve problems outside the box of traditional policing. The purpose of this was to quell uneasy relationships in neighborhoods with unfavorable opinions of police in an attempt to build confidence and trust (Cao et al., 1996). In the 1990s, a strategy of community policing was developed and bolstered by a crime bill that funded the hiring of 100,000 law enforcement officers contingent upon their engagement in community policing. Community policing exposes officers to citizens in positive circumstances, who they may not have otherwise encountered, and these positive interactions improve perceptions of police (Lurigio and Skogan, 1994). According to Ren et al. (2005), increased police contact yielded greater public support, with those

involved in volunteer programs with police most profoundly impacted due to being exposed to officers under positive circumstances. Community policing has changed police culture by shifting the occupational attitudes of officers from an aggressive hard-nosed approach which favors enforcement and crime fighting to a problem solving approach with a vested interest in partnership with the community (Paoline et al., 2000).

The works cited above create a clear picture of the landscape of public perceptions of policing. Furthermore, the community policing model described above illustrates how the profession of policing is strongly invested in earning the confidence and trust of the public. The literature demonstrates how the profession has evolved in an effort to gain public support.

Professionalism in Policing

The term “profession” refers to a social division of labor defined by both cognitive and normative elements, and tends to be focused on elites (Larson, 1977). In medieval Europe, a distinction was drawn in early professions between specialists and practitioners within a single occupation, with the latter pertaining to the college-educated elite (Larson, 1977). Professionalism can also be seen as an occupational value if viewed as a way of controlling and organizing work (Evetts, 2011). Historically, very few occupations were considered professions; however, there has certainly been a shift as more occupations are associated with the term “profession” (Evans 2008). Holroyd (2000) remarked, “Professionalism is not some social-scientific absolute, but a historically changing and socially constructed concept in use” (p.39).

A profession can also be defined as an occupation requiring extensive training and formal qualification. Many professions have required credentials for entry into the field. Doctors require certification after medical school, and lawyers must pass the bar exam after law school. Patil (2005) proposed global assessment and accreditation standards for engineers worldwide due to changes in technology and globalization. Views on policing as a profession vary due to the fact that policing requires no uniform licensing or credential. A study conducted by Bumgarner (2006) found that criminal justice students in two-year degree programs were more likely to consider law enforcement a profession than students at four-year institutions. Around the turn of the 20th century, the term “professionalism” gained acceptance in police culture (Walker 1977). Professionalism can be further defined as competence in carrying out the acts required of a professional. Professionalism in policing is associated with fairness, accountability, and quality of services rendered. Social reform has dictated that professional policing should work as an instrument to better society (Walker 1977). One factor that led to increasing emphasis on professionalism in policing was August Vollmer’s revelation that a new era of policing would highlight the importance of police officers’ education. Vollmer served as police chief in Berkeley California, and later as police chief in Los Angeles. During his tenure, he emphasized that education is a key element in professional development.

Professional development plays a part in raising standards by improving policy and practice (Evans, 2008). The first step in police officers’ professional development occurs at the police academy. Historically, police recruits were trained in basic law enforcement procedures; however, in the 21st century, there is an increasing need to train police recruits in disciplines such as problem solving, cultural diversity, technology, and

counter terrorism (White and Escobar, 2008). In order for policing to have the most professional foundation possible, a rigorous selection process and training academy is necessary (White and Escobar, 2008). Police applicants are often required to pass an assortment of written, physical fitness, psychological, oral, and medical examinations prior to appointment to a training academy. Once admitted to the training academy, a police recruit is forced to meet physical and academic standards, and demonstrate job skills such as problem solving and firearms proficiency.

In order to maintain a professional workforce, professional development must be an ongoing process. Required professional development varies from state to state. In New Jersey, mandatory professional development is carried out under the direction of the State Attorney General. Professional development can occur in the form of in service training usually delivered in a classroom lecture setting. Traditional models of information dissemination that have dominated service training in the past should be replaced by knowledge sharing, discussions, and learning new concepts and strategies (Hammond and McLaughlin 1995). It has been found that educators who engaged in intensive professional development increased their job knowledge and improved their institutional practices (Borko 2004).

Diversity is another important ingredient in police professionalism. The Patten Commission (an Independent Commission on policing in the north of Ireland) stated that a police department should be representative of the larger community in order to be legitimate. During the late 1990s and early 2000s, diversity was a major aspect of police reform (Jones and Rowe, 2015). Minorities are underrepresented in American Police

departments. In departments with less than 200 officers, minorities are underrepresented by 27.2% when compared to census data for citizens of that jurisdiction (Mackaig, 2015).

In addition to recruiting a diverse workforce, officers must be trained in cultural diversity. It is important for officers to understand the differences between different groups in society. Learning the customs of different cultures prepares officers to better serve the public. Training in cultural diversity tends to be viewed positively by new recruits, while senior officers perceive the training in a more negative light (Gould, 1997).

Professionalism can be measured by examining how officers use force. Effectiveness and restraint in these situations increase public confidence and improve perceptions of police professionalism (Chackerian, 1974). Level of officer education has been shown to be a factor contributing to how force is administered. A more educated officer is significantly less likely to use force than a non-college-educated officer (Rydberg, 2010). Rydberg (2010) found that “approximately 56% of the encounters involving officers with some college or a 4-year degree resorted to force, whereas nearly 68% of encounters involving officers with no college experience used force” (p. 105). Matthew Bostrom (2005) conducted a study investigating the benefits of higher education for police officers. He examined factors used to evaluate professionalism. These included amount of sick leave, police vehicle traffic collisions, number of awards or commendations, number of times disciplined, as well as performance ratings from supervisors, peers and citizens. While he found that college did not necessarily ensure professionalism, it was determined that Bachelor of Arts degree holders have better work habits than Bachelor of Science degree holders.

Benefits of Higher Education

The study of higher education as a social science discipline can be traced back to the early 20th century, and is attributed to G. Stanley Hall, who developed classes in the discipline at Clark University (Goodchild, 1991). Higher education as a field of study is closely intertwined with many other social science disciplines, and has therefore been influenced by many different fields (Melendez, 2002). The field of higher education studies has experienced significant growth since the 1960s (Altbach, 1996). This section will address the benefits of higher education that have been uncovered through scholarly research in the field.

The field of higher education is challenging for a variety of reasons. It is important to consider that the outcomes of higher education are diverse and complex (Bowen, 1997). There are separate events that take place concurrent with higher education and that may produce benefits not directly related to the education itself (McPherson and Shapiro, 1997). Finally, cross sectional analysis of the benefits of higher education for recent graduates does not take into account benefits realized over the course of one's lifetime (Bowen, 1997). Becker (1993) contended that education should raise productivity by providing knowledge and problem-solving skills.

College education improves a broad range of skills such as communication, critical thinking, judgement, and reasoning, thus facilitating desired change in college-educated individuals (Pascarella and Terenzizi, 1995). This benefit is not diminished for individuals who begin the college experience at a two-year institution. Evidence suggests that the difference in student development of cognitive skills, reasoning, and critical thinking between two- and four-year college degrees is trivial at best (Bohr et al., 1994).

Growth of college students is not limited to the classroom. Informal interactions with faculty outside the classroom have been linked to positive outcomes such as increased intellectual curiosity, growth in autonomy, interpersonal skills, educational aspirations, and persistence in degree attainment among other benefits (Pascarella and Terenzini, 1991). The influence of extracurricular activities should also not be understated. There is a body of evidence suggesting extracurricular activities also aid in cognitive and intellectual development (Kuh, 1993). This notion is further supported by Pascarella (1989), who observed the breadth of student involvement throughout the college experience increases critical thinking. The whole college experience is greater than the sum of its parts. For this reason, even if police officers working full time do not receive the benefits of extracurricular activities, they will still benefit from continuing education. The impact of any one experience is smaller than the overall net effect of attending college (Pascarella and Terenzini, 1991). The shift is imbedded within a mutually reinforcing network of change which occurs throughout the college experience. College allows students to grow in ways that cannot be unattributed to normal maturation (Pascarella and Terenzini, 2005).

The attitudes and values of college students is another area that has been investigated. The college experience has been shown to increase civic and community involvement on to varying extents depending on the level of education attained or area of community service (Pascarella and Terenzini, 2005). Furthermore, postsecondary education has a positive effect on students' ability to address moral problems. College-educated subjects are more likely to use principled reasoning in moral dilemmas, and are also more likely to engage in principled behavior (Pascarella and Terenzini, 2005).

The cost of a college education is significant. When conducting a cost-benefit analysis of postsecondary education, however, it is important to consider non-monetary benefits in addition to financial return on investment (Bowen, 1996). While time and money invested in postsecondary education are substantial, it also provides long-term benefits. Attending college has a positive influence not only on occupation and earnings, but also on cognitive, moral, and psychological characteristics (Pascarella and Terenzini, 2005). Pascarella and Terenzini (2005) suggests that the benefits of higher education reach further than the student, and even extend to the student's children. In addition to the financial benefits, Perna (2005) illustrated that those who earn a bachelor's degree are less likely to smoke cigarettes, have greater civic involvement, and attend plays or concerts more frequently.

Perception of the benefits of college education has been found to vary according to race, gender, and socioeconomic status. A study conducted by Jensen (2010) demonstrated that students from lower income families underestimated both starting and average salaries of college graduates. A lack of understanding of the benefits of higher education may hinder enrollment rates among certain groups. Chosen field of study may be as important as making the decision to pursue postsecondary education (Kirkeboen and Leuven, 2016). Many students do not have enough information about college education to calculate returns. One third of White people hold a bachelor's degree, compared to 18% of Black people and 10% of Hispanic people (Carter, 2006).

Police Officers and Level of Education

Opinions vary with respect to the practical utility of post-secondary education for police officers. White and Escobar (2008) highlight both sides of the argument for hiring college-educated police recruits. Some disadvantages include narrowing applicant pools, disproportionately impacting minorities, and the lack of applicable job skills for policing offered by colleges. Among other arguments supporting college education, it has been suggested that police education should keep pace with the population. College makes applicants well-rounded, in addition to enhancing respect for diversity. College education has also been shown to improve written, verbal, and critical thinking skills. According to Gardiner (2017), college-educated officers in fact save departments money in spite of the higher salaries they often earn. College-educated police officers use less sick time, have fewer job-related injuries, and are less likely to be sued (Carter and Sapp, 1989). These benefits are generally true across all professions. College education reduces smoking rates, increases exercise rates, and reduces obesity rates (Ma et al., 2016). The purpose of this section is to gain an understanding of the current state of police officer education.

A comprehensive study of the role of higher education in law enforcement was conducted by Christine Gardiner (2017), entitled “Policing Around the Nation: Education, Philosophy and Practice”. The work was not intended to extol the benefits of higher education for police officers, but rather to provide a snapshot of the state of policing as it relates to education, philosophy, and practice. This work is significant because education data related to law enforcement was last collected in 1988. The study had two main goals: 1) to understand factors which influence education policy, and 2) to

learn about other policies that may correlate with higher education. It was found that the level of education of the chief or sheriff has an impact on college education requirements; CEOs with a master's degree are most likely to require higher levels of education for promotion (Gardiner, 2017). More than half of agencies nationwide provided at least one educational incentive, but this factor varied from state to state, with agencies headed by an educated chief executive being most likely to offer incentives for higher education pursuit (Gardiner, 2017). The Gardiner (2017) study offered several insights that are applicable to this study:

- 81.5% of police agencies only require a high school diploma for hiring, while only 1.3% require a 4-year degree.
- 93.8% of law enforcement officers in the United States have access to a brick and mortar college which confers 2 year degrees. 81% have access to 4 year institutions.
- Chief executives with graduate degrees employ significantly higher percentages of college graduates, and are significantly more likely to require college degree for promotion.
- Collective bargaining increases the chances of securing a chief executive with a graduate degree or better.
- Chief executives in the Northeast are most likely to have a master's degree or higher.
- 55.8% of agencies provide at least one incentive to pursue higher education.

Incentives

An incentive is designed to motivate someone to do something. Motivation is an important factor contributing to the success of organizations. It enables individuals to take action of varying effort with greater motivation yielding greater effort (Goddard, Hoy, and Hoy, 2004). Motivation can come from external sources (“extrinsic motivation”), and internal sources (“intrinsic motivation”). Generally, human action is propelled by a combination of extrinsic and intrinsic motivation (Mone and Kelly, 1994). Individual motivation is strongly correlated to both the quality and quantity of an organizations’ results (Harter and Schmidt, 2000). While motivation does improve performance, other factors such as ability must be taken into account (Bess and Dee, 2008).

Two general theories of motivation are characterized in the literature. The first is need theory, which contends that individual needs within a person create tension that can only be resolved through action (Bess and Dee, 2008). Maslow (1943) developed a hierarchy of needs that begins with basic necessities such as food clothing and shelter, and ultimately advances to the fulfillment of one’s potential as lower-tier needs are met. According to Maslow’s theory, the satisfaction of lower needs causes the emergence of higher needs. The higher the need, the longer gratification can be delayed (Maslow, 1943). McClelland (1971) developed a theory of need for achievement which contrasted Maslow’s theory. McClelland suggested that immediate gratification was necessary to keep individuals with a need for achievement motivated.

The second type of theory is process theory. Process theories focus on the interaction between external and internal forces (Bess and Dee, 2008). Expectancy

theory is a process theory describing motivation. In this theory, workers recognize and value a reward, and work harder to achieve the reward (Bess and Dee, 2008). The best performers in organizations associate a job well done with the likelihood of receiving an award they value (Van Eerde and Thierry, 1996). Goal theory assumes self-efficacy, rather than pursuit of a reward in describing motivation (Bess and Dee, 2008). The assumption is that human behavior is based on goals (Locke and Latham, 1990). Finally, equity theory states that people are constantly assessing the return on their investment in an organization. If they feel they are treated unfair, motivation is reduced while if they are treated well, motivation is increased (Bess and Dee, 2008). Process theory's emphasis of external forces allows us to consider the effect of incentives on human behavior.

Incentives are broadly used for a variety of reasons, such as encouraging compliance, performance, or loyalty. In business, incentives do not have to be financial, and may take the shape of recognition of a job well done. Nelson (2001) referred to recognition as formal programs such as employee of the month; however, social recognition can come in the form of informal acknowledgement or appreciation for quality work (Luthans, 2000). A study conducted by Peterson and Luthans (2006) investigated the effects of financial and non-financial incentives related to profit, customer service, and turnover in a fast food franchise corporation. It was discovered that while financial incentives initially showed greater success, over time both incentive types had an equally significant impact (Peterson and Luthans, 2006).

In certain fields, incentives play a major role in employee behavior. Sales people operating under a quota system offering incentives in the form of bonuses vary their

effort to maximize these incentives (Oyer, 1995). Individuals value rewards, enjoy performing tasks, and care about their image (Benabou and Tirole, 2006). In order to maximize the incentive system, goals should be realistic yet challenging (Cohen, 1995).

It is important to consider that incentives can stifle intrinsic motivation. In education, incentives have shown moderate success in encouraging children to read, but they are reading for the incentive. The long term success of a lifetime of reading is questionable, because at some point the incentive must be removed, and the student may lack the intrinsic motivation to continue reading (Gneezy et al., 2011). The same logic applies to contributions to the public good and self-improvement programs. The effects of incentives are dependent upon their design, and their interaction with intrinsic motivation (Gneezy et al., 2011). Deci (1972) contended that financial incentives reduce intrinsic motivation. Rewards narrow an individual's focus, and force them to rush through tasks (Kohn, 1988). Psychologists and behaviorists also have argued that monetary rewards are counter-productive (Baker et al., 1988).

Profit sharing is a form of incentive where individual compensation is based on the performance of the entire organization. It is meant to be an extrinsic motivator in the same way merit pay and bonuses incentivize productivity. Profit sharing has been shown to be more effective than merit pay and bonuses in terms of increased productivity (Baker et al., 1988); however, this incentive type is not relevant to policing due to the fact that policing is inherently not-for-profit.

Merit pay refers to financial compensation given for exemplary performance. This tactic is often used in schools with the purpose of motivating teachers. Merit pay programs almost always fail because they do not provide a solution to motivate teachers,

but in exceptional school districts where they are used as a means of problem solving it can be an asset (Murnane and Cohen, 1985). Performance-related pay has been widely used in the U.S. federal civil service for many years, but its effectiveness has yet to be properly evaluated (Milkovitch and Widgor, 1991). A study conducted in the UK found that a majority of workers (57%) agreed with the concept of relating pay to performance; however, the results of the study suggested only a small effect on general motivation (Mardsen and Richardson, 1994). There appears to be an incongruence between performance-related pay theory and its practical application. It is important to fairly and accurately gauge employee performance in order to improve the success of merit pay programs. It should be noted that programs' incentive effect can be diminished if too many employees maximize the benefit and it becomes viewed as automatic (Mardsen and Richardson, 1994). Leadership credibility plays a role in employee acceptance of merit pay programs. An organization may have an excellent means to evaluate employees, but if employees do not respect the evaluators, or feel they are poor leaders, the program will not be viewed as legitimate (Gabris and Ihrke, 2000). The work of teaching is broad and difficult to quantify. To further complicate matters with respect to merit pay, unionized school districts tend to be resistant to the implementation of such programs. Goldhaber et al. (2005) argued that more performance information is necessary in order to successfully implement merit pay systems while minimizing the power of labor unions who are politically resistant to the change. Thresholds for merit pay should be reasonably achievable, but not so low that every employee is able to meet the standard. In policing, merit pay is offered for a variety of reasons, including exemplary performance, taking on additional responsibilities, and as a reward for attaining an advanced degree.

Tuition reimbursement is another type of incentive. In the case of tuition reimbursement, continuing education is incentivized to attract employee interest and in turn raise the level of education of the organization. Some employers are fearful that employees will take advantage of tuition reimbursement, and once the degree is obtained, they will leave the company. A study by Benson et al. (2004) used data from 9,439 manufacturing employees to illustrate that turnover was reduced while the employees were in school. While voluntary turnover increased after employees earned graduate degrees, subsequent promotion was found to mitigate this problem. Tuition reimbursement can also produce a positive effect on employee job satisfaction (Norhaug, 1989). These conflicting ideas represent the ease of movement gained from having a graduate degree as well as the job satisfaction an employee feels when their growth is supported by the employer (Benson et al., 1994). Promotion is an important consideration for employers aiming to retain employees with advanced degrees. Employees must feel that their immediate jobs are compatible with their long-term goals (Mitchell, 2001).

Police Department Organization

Police agencies traditionally operate under a paramilitary command structure, usually with multiple layers of supervision or oversight. The organization of a police department can be viewed in two ways. There is a horizontal element that divides specialized units and work, while a hierarchical (i.e., vertical) element separates members according to their authority (King, 2003). Four differential categories into which resources can be organized vertically are skills, rewards, status, and seniority (Evan, 1993). Vertical and horizontal structures are not the only way to characterize police organization. Maguire and Wells (2001) used vertical, functional, temporal and spatial

elements to describe organizational structure, while Hall (1987) used complexity, formalization, and centralization.

In policing, like many other public service jobs, resources are finite, and must be allocated in the best interest of the mission. Separation based on authority (“tall rank structure”) has received the most attention from critics of police organizations (King, 2003). These critics favor trimming layers from the rank structure in favor of improved community relations (Sparrow, 1988). In this vertical structure, patrol officers perform community police functions, while sergeants, lieutenants, captains, and chiefs make up the organizational bureaucracy. Tall rank structures have advantages and disadvantages. Disadvantages include impeded internal communications and slower response to external change (Sparrow, 1988), while advantages include improved ability to supervise (Wilson, 1963) and greater rewards, which may increase morale (Mastrofski, 1998). Ultimately, rank should be structured to facilitate the control required to meet the needs of the mission (King, 2003). Departments engaging in traditional law enforcement tactics can benefit from a hierarchical structure while agencies with missions that focus on more complex tasks like community policing do not require the same kinds of hierarchies (Langworthy, 1992).

Every aspect of complex organizations cannot be controlled by one person. For this reason, it is necessary to empower employees to be leaders. In the most successful organizations, these leaders take initiative to serve the best interest of the company without the need for micromanagement (O’Toole and Lawler, 2006). In policing, a paramilitary rank structure and chain of command that mimics traditional military structures is established to accomplish this goal. Many critics such as Rasor (1999) have

argued for a reduction in layers of the chain of command. He argued against the paramilitary chain of command, and contends it is still possible to maintain order without layers of bureaucracy. In a scenario where the chain of command is shortened, employees feel empowered to make decisions on their own. Others have argued that the chain of command or rank structure should be heightened to increase the potential for rewards to motivate officers (Lawton, 1996). The issue of links in the chain of command is prevalent in the literature, however a consensus has not been reached as to a best practice for the industry.

Police Culture

In order to illustrate why some police officers may or may not want to pursue higher education independent from incentives offered, it is helpful to establish an understanding of the police culture. Culture is defined as the customs and behaviors of a group. Manning (1995) suggested that “occupational cultures contain accepted practices, rules, and principles of conduct that are situationally applied, and generalized rationales and beliefs” (p.472). Policing has a unique culture unto itself, and there are a variety of reasons this distinct culture exists.

Police officers enter a unique subculture every time they don their uniforms (Van Maanen, 1974). Police officers experience a schizophrenic experience where they are forced to deal not only with a hostile citizenry, but also a hostile bureaucracy. The requirements of policing are often uncertain in nature, and administrators are constantly seeking to control these unpredictable and uncertain events (Brown, 1981). Policing is inherently dangerous, and officers are trained to understand the risks associated with their profession. This presence of danger may unify officers, yet also distance them from the

public (Kappeler, 1998). In a traditional model of police culture, Paoline (2003) demonstrated how both the occupation and the organization coupled with the stress and anxiety of the job cause the police officer to use coping mechanisms, the sum of which produce police culture. In the model, danger and coercive authority (“occupational”) along with supervisor scrutiny and role ambiguity (“organizational”) cause stress and anxiety, which lead officers to be suspicious, stay sharp, lay low, and orient him or herself as a crime fighter. The result is social isolation and loyalty; two elements that frequently surface in literature discussing police culture. This loyalty is often expressed in the form of professional courtesy. Police officers treat each other differently than members of the public by offering perks such as the use of discretion for traffic offenses.

The police culture can be both a negative and positive force. Some researchers contend that the culture can promote civil rights violations (Kappeler et al., 1998). Terms such as the blue wall of silence, or the idea that police should not “rat” on each other are negative and researchers have shown these are very much present in police culture (Walker, 2001). Of course, these values vary according to individual officers, as does the extent to which they are willing to extend them to help fellow officers involved in wrongdoing. In a study by Wolfe and Piquero (2011), 483 officers in the Philadelphia police department were asked a variety of questions ranging from how they view the use of discretion in overlooking minor infractions committed by other officers to large-scale corruption. This was done in an attempt to understand police culture as it relates to the role of organizational justice in police misconduct. The results of the study indicated that officers who felt their agency engaged in fair managerial practices were less likely to

accept abuses of authority. The study suggested that a framework of fair organizational justice should be used by managers to reduce misconduct.

How police perceive fairness and organizational justice within the agency has been shown to be a predictor of deviance and misconduct. Other variables such as age, length of service, and opinion on noble cause corruption (i.e., violating an individual's rights or the rules of the system to make an arrest) also impact police misconduct (Wolfe and Piquero, 2011). Police culture in the form of camaraderie can help to alleviate the strains of daily police work (Waddington, 1999). In addition, studying police culture is helpful in understanding how new police recruits learn, devising ways to keep police accountable, and also to investigate deviance (Paoline, 2003). It is important to understand that police culture is not homogenous. There is a struggle nationwide in policing to diversify a force which is 75% white (Linos, 2017). As police departments diversify and philosophies change, we can expect more variation in police culture than we see today (Paoline, 2003).

Summary

In this chapter, I have discussed public perception and support of policing, professionalism, benefits of higher education, incentives, police culture, and police department organization. The literature reviewed underscored the importance of college education for police officers. The benefits of higher education clearly apply to policing, and can significantly increase professionalism. Literature discussing incentives was also reviewed, as this study will examine their effect on the continuing education choices of police officers.

Throughout the review of relevant literature, I was unable to locate research related to the factors that influence continuing education choices of municipal police officers. The 2017 Gardiner study that provided aggregate data related to education in police officers around the nation was relevant to this research. However, the study did not identify relationships between independent variables and officers' decisions to continue their education.

CHAPTER III: METHODOLOGY

Purpose

The purpose of this research was to identify factors that influence the continuing postsecondary education choices of police officers. This chapter will identify the population studied, data sources, methods of collection, data analysis, and hypotheses. This chapter will also provide an overview of how the data will be analyzed. Aggregate data at the organizational level will be displayed on a table to reflect levels of education, and factors which may influence continuing education choices. At the individual level, binary logistic regression will be used to derive study conclusions.

I was unable to identify any other study that attempted to identify factors that compelled police officers to attain higher degrees. The framework of this study uses incentives identified in the Gardiner study. This study builds upon the descriptive statistics by attempting to identify factors that influence officers' decisions to attain higher degrees.

Research Questions

This research used data related to police officer education levels and existing education incentive programs in addition to other factors to determine the most effective means of influencing higher education within Hunterdon County New Jersey police departments. Other factors analyzed included length of service, rank of officer, education of chief executive in department, and educational standards for hiring.

Research Questions: Organizational Analysis.

- What are the different levels of education in Hunterdon County police departments?
- What educational incentives are offered in Hunterdon County police departments?
- How do education incentives which are offered by rural police agencies in Hunterdon County, NJ affect the level of education within police departments?
- What is the level of education of the chief executive officer of each rural police agency in Hunterdon County?
- How do educational standards for hiring influence the level of education in a police department in rural Hunterdon County, NJ?
- How do educational standards for promotion influence the level of education within a police department in rural Hunterdon County, NJ?

Sub-questions.

- How many agencies offer at least one incentive?
- How many agencies offer multiple incentives?
- How many agencies offer no incentives?
- How many agencies have a college-educated CEO?
- How many agencies require college for initial employment?

Research Questions: Individual Analysis.

- What are the factors which influence continuing education choices of officers in small municipal police agencies?

- How do existing education incentives influence the continuing education choices of officers?
- How does CEO education level influence the continuing education choices of the officers?
- How does length of service influence continuing education choices for municipal police officers in Hunterdon County New Jersey?
- How does rank influence continuing education choices of officers?

Population and Sample

The sample in this survey was retrieved from the municipal police officers and police departments of Hunterdon County New Jersey. Hunterdon County is located in western central New Jersey, and is one of the state's more rural counties with a population of 125, 059 (2017 US Census Estimate). The population is 91.36% white, 2.69% black, 0.13% native American, 3.26% Asian, 0.03% Pacific Islander, and 1.22% other. The county's population is ranked 18th out of 21 counties in New Jersey. This research is most usefully focused on small rural police departments such as those in Hunterdon County, New Jersey because they are responsible for all law enforcement activities within their jurisdictions, and they lack layers of administration and specialization, focusing more responsibility on individual officers (Falcone and Wells, 1995).

Fourteen requests for data were made in total. One request was sent to the chief of police, or officer in charge of every police department in Hunterdon County. The Town of Clinton did not supply the requested data. This data could not be obtained via Open

Public Records Act (OPRA) because while an agency must provide information they have on hand, they are not required to generate records that are not ordinarily kept according to N.J.S.A. 47:1A-1 et seq. It should be noted that while OPRA requests could have been made to solicit data for this study, they were deemed unnecessary due to the cooperation of the thirteen responding agencies. The dataset contains 13 agencies and individual data on 140 officers. The 14th agency's absence from the sample was not considered significant as the Town of Clinton is a small agency accounting for less than 10% of officers in the county. In the agency analysis, 13 responses account for 92% of the municipal law enforcement agencies in the county, and providing a sufficient picture of the state of education and incentives offered within the county.

Data Sources

The data used in this study was collected from records provided by each municipality's police chief or officer in charge, without the use of human subjects. The data obtained from these records provided the information necessary to continue the study. The first dataset was used for organizational analysis, which involved a basic overview of each police department. The number of officers, educational standards for hiring and promotion, as well as education incentives were included in the first set of results. Data for individual analysis was provided for each officer in the department. No names were attached to the results to protect the identities of the officers. This data contained information related to length of service in law enforcement, length of service with department, current level of education, level of education when hired, and job classification. Job classification is an important distinction, as the level of responsibility

at each rank differs between departments. Due to differing responsibility at equal ranks between departments, job classification was used in lieu of rank.

Data Collection

The information needed to complete this study was provided by the police chiefs from each municipality and is up to date as of 2018. A total of 13 responses were received and each contained all of the following requested data:

- Agency Name
- Number of Officers
- Tuition Reimbursement (Yes/No)
- Incentive Pay (Yes/No)
- Education Standards for Hiring (College degree or No)
- Education Standards for Promotion (College Degree or No)
- CEO Education Level

Based on the responses from the thirteen agencies that returned data, educational standards for promotion have been removed as an independent variable because none of the departments require a higher degree for promotion than they do for hiring.

Research Design

This study was conducted in two phases. Organizational analysis revealed previously unseen aggregate data related to education, and incentives in each police department. The second phase of analysis (individual) was designed to identify relationships between several independent variables, and whether or not they influence police officers' choices to continue their education.

Phase One – Organizational Analysis.

The first analysis conducted was organizational and the subject of this analysis were the individual municipalities. Due to the small sample size, the results will show aggregate data related to education and variables. Systematically displaying condensed data has an immense impact on understanding while focusing and organizing information (Miles et al. 1994). For this reason, the aggregate data will be represented visually through the use of a table.

Research Question 1: What are the different levels of education in Hunterdon County police departments? Previously unseen aggregate data was compiled to show the percentage of officers in each agency who have attained a bachelor's degree.

Research Question 2: What educational incentives are offered by Hunterdon County police agencies? The responses of the police chiefs/officers in charge were used to provide data on existing incentives offered in Hunterdon County police departments.

Research Question 3: How do education incentives offered by rural police agencies in Hunterdon County, NJ affect the level of education of the police officers? Data related to incentives provided by each agency and percentage of officers who continued their education were compared.

Research Question 4: How does the level of education of the chief executive officer of rural police agencies in Hunterdon County, NJ influence the level of education of officers within a police department? Data related to CEO education was included and compared to percentage of officers with a college degree.

Research Question 5: How do educational standards for hiring influence the level of education in a police department in rural Hunterdon County, NJ? Data was displayed related to hiring standards within each agency

Phase Two- Individual Analysis.

For the purposes of individual data analysis, binary logistic regression was used to quantify the effect of each independent variable on the dependent variable while controlling for other variables. The dependent variable (whether or not a higher degree was obtained) was dichotomous, and there are several independent predictor variables. The independent variables were tuition reimbursement, incentive pay, college degree required for hiring, college-educated CEO, and job classification. In this study N=140, an adequate sample size for the six predictor variables. The dependent variable was dichotomous, and the independent predictor variables were both continuous and categorical; therefore, logistic regression was deemed the most appropriate method of analysis.

IBM SPSS statistical analysis software was used to perform statistical tests. Binary logistic regression was used to determine the influence of each predictor variable on the dependent variable of whether or not education was continued to determine factors that influence continuing education. Chi-Squared tests indicated that the variables have predictive power.

Dependent (Outcome) Variable.

Continued Education. For the purposes of this study, level of education ranged from high school graduate to doctoral degree. Education data was obtained for each

officer and is current as of December 2018. For the purposes of individual analysis, officers who obtained a higher degree after being hired were considered to have continued their education. An officer met the criteria of higher degree attainment if he or she has attained a higher degree while employed that he or she held upon hiring. This measure was used to determine whether an officer continued their education for the purposes of this study. Attainment of a higher degree for an individual officer was the dependent variable. This variable is dichotomous (i.e., whether or not education was continued) and showed an outcome that may have been influenced by a variety of predictor variables.

Independent (Predictor) Variables.

The independent predictor variables were used in the regression to determine the effect of each independent variable on the dependent variable. The availability of education incentives such as tuition reimbursement, a college-educated CEO, college degree requirements for hiring, length of service and job classification were all independent predictor variables that may have influenced the dependent outcome variable.

Dichotomous coding was used for the following categorical variables:

- Attained higher degree (0,1)
- Education Incentive available Yes or No (0,1)
- College degree required for hiring Yes or No (0,1)
- CEO with Bachelor Degree Yes or No (0,1)

Continuous predictor variables were coded as follows:

Job Classification was coded using a set of dummy variables to represent a multicategory nominal variable. Four category variables were used to reflect patrol officer, first line supervisor, middle manager, and executive level commander. The reference variable in this case was patrol officer, and three dummy variables were first line supervisor, middle manager, and executive level commander.

- Patrol Officer: An officer who conducts general police duties without the responsibility of supervising other officers.
- Front Line Supervisor: An officer who may conduct general police duties, and is also tasked with supervising and evaluating subordinates.
- Middle Manager: This officer is generally tasked with administrative responsibilities, and acts as a second-level supervisor while taking direction from command staff.
- Executive Level Commander: Officers at this level are responsible for shaping the mission and values of the department. He or she is also responsible for writing policy and making necessary changes to existing policy.

Individual Analysis Research Questions

Research Question 6: Do education incentives offered by rural police agencies in Hunterdon County, NJ affect the continuing education choices of the police officers?

Research Question 7: Does the level of education of the chief executive officer of rural police agencies in Hunterdon County, NJ influence the continuing education choices of officers within a police department?

Research Question 8: How does length of service influence continuing education choices for municipal police officers in Hunterdon County New Jersey?

Research Question 9: How does rank (expressed as job classification) influence the continuing education choices officers at that specific rank?

For the individual data analysis, the individuals were divided into two groups:

- 1) Those who attained a higher degree while employed
- 2) Those who did not attain a higher degree while employed

Due to the larger sample size of individual officers where N=140, Binary Logistic regression testing was used to determine the significance of the relationship between variables. Sub groups were created to separate individuals who have and have not continued their education. Binary logistic regression was used to compare the dichotomous dependent variable with each of the independent variables. As a result, the effect of each independent predictor variable was determined while controlling for the other variables.

Limitations of the Study

This study provided a cross sectional analysis of publicly available data related to police officer education at the time of the study. It has been compared to education incentives currently being offered in each of the police agencies as well as other factors that may or may not have influenced continuing education choices of officers. The study did not explore the possibility that cultural factors may exist in a department that are separate and distinct from the factors that were studied, which could influence the results. In addition, this study did not account for differences in similar incentive programs, such

as amount of merit pay or tuition reimbursement. Hunterdon County is different from the more developed counties in the Eastern part of the state where larger police forces are more common. There are also no agencies that use the New Jersey Civil Service Commission hiring and promotional standards in Hunterdon County; therefore, it is unlikely that these results will apply to officers in civil service departments. Civil service agencies require only high school education for hiring, and do not require college for promotion. Career advancement is based solely on a test. There are 213 civil service agencies in New Jersey (NJ Civil Service Commission) that represent less than half of all 565 municipalities. No demographic information was obtained; therefore, the possible impact of race or sex was not accounted for in the study. The study simply attempted to illustrate relationships between certain identified factors, and higher levels of education. The variable of education standards for promotion did not play a role in this study as no agency requires a higher degree for promotion than they require for initial employment with the agency.

Summary

This chapter described the quantitative methods used to analyze data with respect to continuing education choices of police officers, and also explained how independent variables affected officers who either did or did not continue their education. The impact of independent variables such as incentives, chief executive's level of education, educational standards for employment, and rank were studied in an attempt to identify factors that influence the postsecondary education choices of police officers in rural Hunterdon County, New Jersey. The chapter summarized data collection and organization, and provided a means for reviewing the aggregate data retrieved from each

police department. Two levels of analysis were conducted. Phase one of analysis (organizational) provided a window into previously unseen aggregate data related to education in Hunterdon County New Jersey Police Departments. In phase two, the analysis of individual officers, binary logistic regression was used where the dependent variable (whether or not a higher degree was obtained) was dichotomous, and there were several independent predictor variables. The independent variables include tuition reimbursement, incentive pay, college degree required for hiring, college-educated CEO, length of service and job classification. The following chapter (Chapter IV) will discuss the findings.

CHAPTER IV: ANALYSIS OF DATA

The purpose of this study was to identify factors influencing the continuing education choices of municipal police officers in Hunterdon County, New Jersey. Chapter IV will focus on the two levels of analysis conducted in this study; organizational and individual analysis.

The organizational analysis displayed descriptive statistics collected from police agencies related to available education incentives, CEO education level, and the percentage of officers who have college degrees. Data was collected from thirteen municipal police agencies, and was displayed in aggregate to establish a picture of education levels and incentives offered within Hunterdon County municipal law enforcement. The percentage of officers who continued their education was also displayed. This first phase of analysis summarized data provided by the individual agencies using tables and descriptive statistics.

The second phase of analysis, individual analysis, was quantitative in design and addressed the significance of the relationship between the predictor variables and the outcome variable. Quantitative analysis was conducted using binary logistic regression to analyze the relationship between a series of independent variables and the dependent variable of whether or not an officer attained a higher degree while employed as a police officer.

Phase One – Organizational Analysis

Data related to level of education in each department was captured below in Table 1.

Table 1. Organizational Education Data

Agency	Sample Size	Tuition Reimbursement	Incentive Pay	Education Standard Hiring	CEO Education	Percent of College Degrees	Earned Higher Degree
Clinton Twp.	17	Yes	No	Bachelor's	Doctorate	64.7 (11)	29.4 (5)
Delaware	7	No	No	No	High School	42.8 (3)	0
Flemington	15	Yes	No	No	High School	26.6 (4)	0
Franklin	7	No	No	No	Associates	28.5 (2)	0
Frenchtown	2	No	No	No	High School	0 (0)	0
High Bridge	7	No	No	No	Bachelor's	42.8 (3)	14.2 (1)
Holland	5	Yes	No	No	High School	20 (1)	0
Lambertville	10	No	Yes	No	High School	20 (2)	0
Lebanon	9	Yes	No	60 Credits	Bachelor's	66.7 (6)	22.2 (2)
Raritan	27	Yes	No	Bachelor's	Master's	92.5 (25)	48.1 (13)
Readington	17	Yes	Yes	60 Credits	High School	64.7 (11)	5.8 (1)
Tewksbury	10	Yes	Yes	No	Bachelor's	50 (5)	20 (2)
West Amwell	7	Yes	No	No	Associates	14.2 (1)	0

Data in Table 1 was provided by the thirteen agencies listed above

Addressing Research Question 1: What are the different levels of education in Hunterdon County police departments?

Members of Hunterdon County law enforcement have diverse educational backgrounds ranging from high school education to doctorate degrees. 53% of officers in the county have a bachelor's degree or higher. Seventeen percent of officers in the county have attained a higher degree while employed as a police officer. Education between individual departments also varies greatly. In Raritan Township 92.5% of officers have a bachelor's degree while 52.8% of the population in the study have a bachelor's degree. Raritan, Readington, and Clinton are the three largest departments in the county. They also have the highest percentage of college-educated officers.

Addressing Research Question 2: What educational incentives are offered by Hunterdon County police agencies?

Christine Gardner's 2017 study identified a variety of education incentives used in police agencies nationwide. The incentives identified in the Gardiner study were used here. Two of these incentives were present in the sample of Hunterdon County police agencies. Tuition reimbursement is available in eight of the thirteen departments in the study. This accounts for 61.5% of the agencies. Merit pay for college education is available in three of the thirteen departments accounting for 23% of the sample. Two agencies offer multiple incentives with both tuition reimbursement and merit pay, accounting for 15% of the sample.

All of the aforementioned incentives are communicated through the collective bargaining agreement. All agencies within the county are unionized, and engage in collective bargaining. None of the agencies in this sample are governed by the regulatory practices of the New Jersey Civil Service Commission. Civil service agencies require only a high school education for hiring, and do not require college for promotion. Career advancement is determined based solely on a test.

Addressing Research Question 3: How do education incentives offered by rural police agencies in Hunterdon County, NJ affect the level of education of the police officers?

There were nine agencies in the sample which provide at least one education incentive. 117 officers had access to incentives while 23 did not. The officers who had access to incentives continued their education at a rate of 19.7%. Officers who did not

have access to incentives continued their education at a rate of 4.3%. Officers with access to tuition reimbursement continued their education at a rate of 21.5% while officers without access to tuition reimbursement continued their education at a rate of 3%. When comparing continuing education between agencies which offer incentives and those who do not, agencies offering tuition reimbursement had higher rates of continuing education.

Officers with access to merit pay continued their education at a rate of 8.1% while officers without merit pay continued their education at a rate of 20.3%. This result was surprising because officers who are not compensated for education are continuing their education at higher rates. Incentives are obtained through collective bargaining. These agreements change over time. In the past, Raritan police had incentive pay, but the contract has since been renegotiated. When Raritan's officers are removed from the dataset, higher degree attainment for the officers without access to merit pay drops to 6.2% and the groups are basically identical.

Addressing Research Question 4: How does the level of education of the chief executive officer of rural police agencies in Hunterdon County, NJ influence the level of education of officers within a police department?

A comparison of agencies with college-educated CEOs and non-college-educated CEOs revealed that officers continued their education at higher rates when the CEO has a four-year college degree. Five agencies had a college-educated CEO who held at least a bachelor's degree. Clinton, High Bridge, Lebanon, Raritan, and Tewksbury had college-educated CEOs. Each of these agencies had at least one officer continue their education

while employed. Eight agencies have a non-college-educated CEO. Only one of those agencies had an officer continue their education.

Addressing Research Question 5: How do educational standards for hiring influence the level of education in a police department in rural Hunterdon County, NJ?

Raritan Township, and Clinton Township required a college degree for initial employment which accounts for 15% of the sample. Not surprisingly, these two agencies also have the highest rate of officers with bachelor's degrees at 92.5% and 62.7%. It was surprising however, that these two agencies also have the highest rates of continuing education at 48.1% and 29.4% because when these officers continue their education, a large portion of them are pursuing graduate degrees. It should be noted that the college degree hiring standard has not been in place long enough to account for senior officers who were hired prior to its implementation.

Summary

As a result of this study, previously unseen aggregate data related to levels of education, and incentives have been displayed and discussed. There is a great deal of educational diversity in Hunterdon County police agencies with respect to the education of the officers and the chief executives. It was also interesting to note how departments within the county varied with respect to education incentives. In the next section, a more in-depth analysis will take place using the entire population of officers.

Phase Two: Individual Analysis

Research Question 6: Do education incentives offered by rural police agencies in Hunterdon County, NJ affect the continuing education choices of the police officers?

Research Question 7: Does the level of education of the chief executive officer of rural police agencies in Hunterdon County, NJ influence the continuing education choices of officers within a police department?

Research Question 8: How does length of service influence continuing education choices for municipal police officers in Hunterdon County New Jersey?

Research Question 9: How does rank (expressed as job classification) influence the continuing education choices officers at that specific rank?

Null Hypothesis

Higher degree attainment is not influenced by incentives, CEO education level, rank, or length of service.

Binary logistic regression.

SPSS software was used for the binary logistic regression in this study. The enter method was used to determine the impact of the following independent predictor variables on attainment of a higher degree: tuition reimbursement, merit pay, college hiring standards, college-educated CEO, length of service, and rank.

Table 2 Goodness of Fit Statistics

<i>Model Summary</i>			
Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	73.267 ^a	.325	.542

a. Estimation terminated at iteration number 7 because parameter estimates changed by less than .001.

The Cox and Snell, and Nagelkerke pseudo r^2 mimics r^2 in OLS regression. The Cox and Snell R square is .325 while the Nagelkerke R square is .542. The fitted model with predictor variables accounts for between 32 and 54% of the variance in the dependent variable according to the pseudo r^2 results.

Table 3 Step 0 Classification Table
Classification Table^{a,b}

		Predicted		
		Continued_Education	Percentage	Correct
	Observed	.00	1.00	
Step 0	Continued_Education .00	116	0	100.0
	1.00	24	0	.0
Overall Percentage				82.9

- a. Constant is included in the model.
b. The cut value is .500

The Null model shows how the data would be classified if there were no predictor variables. The null model was correct in 82.9% of the cases because that share did not continue their education. None of the sample was predicted to continue in the null model, because less than half of the sample went on to attain a higher degree.

Table 4 Step 1 Classification Table

Classification Table^a

		Predicted		
		Continued_Education	Percentage	Correct
	Observed	.00	1.00	
Step 1	Continued_Education .00	110	6	94.8
	1.00	9	15	62.5
Overall Percentage				89.3

- a. The cut value is .500

The block 1 classification table accounts for predictor variables and how well it predicts the outcomes. The block 1 classification table was correct in 89.3% of cases. The block 1 classification table is an improvement of 6.4% over the null model. The block 1 classification table correctly predicted higher degree attainment in 15 officers, and correctly predicted that 110 officers did not attain higher degrees, but the share of successful predictions among those who continued their education is substantially lower. Logistic regression for attainment of higher degree:

Table 5 Logistic Regression

<i>Variables in the Equation</i>		B	S.E.	Wald	Df	Sig.	Exp(B)
Step 1 ^a	TuitionReimbursment	-.414	1.191	.121	1	.728	.661
	Incentive_Pay	-.156	1.105	.020	1	.888	.855
	College_Hiring_Stand	1.275	.969	1.730	1	.188	3.579
	College_CEO	3.713	1.266	8.604	1	.003	40.962
	Time	.011	.045	.062	1	.803	1.011
	Front_Line	2.360	.827	8.144	1	.004	10.595
	Mid_Manager	3.849	1.582	5.918	1	.015	46.925
	Executive	2.822	1.084	6.785	1	.009	16.816
	Constant	-6.229	1.437	18.794	1	.000	.002

a. Variable(s) entered on step 1: Tuition_Reimbursment, Incentive_Pay, College_Hiring_Standard, College_CEO, Time, Front_Line, Mid_Manager, Executive.

Table 5 shows the results of the binary logistic regression for attainment of a higher degree. Two types of predictor variables were statistically significant: college-educated CEO and rank. The key to assessing impact of each predictor was the odds ratio or Exp(B). When one is subtracted from the Exp(B), we determine the odds of how many times more likely an officer exposed to that predictor is to attain a higher degree.

The strongest predictor of higher degree attainment was the presence of a college-educated CEO. In departments where the CEO had a college degree, officers

were 39.962 times more likely to attain a higher degree. Rank was a statistically significant predictor $p(<.05)$ in all three categories: front line supervisor, mid-level manager, and executive level commander. At those ranks, the odds were 9.5 times, 45.9 times, and 15.8 times respectively more likely to attain higher degrees than the reference group of patrol officers.

Addressing Research Question 6: Do education incentives offered by rural police agencies in Hunterdon County, NJ affect the continuing education choices of the police officers?

Merit pay and tuition reimbursement were not found to be statistically significant even though the literature review showed extrinsic motivators as commonly used in professional environments. The literature discussed theories focused on the interaction between external and internal forces. There are certainly a variety of factors that influence continuing education, including intrinsic and extrinsic motivation. Workers recognize and value rewards, and then work toward achieving those rewards (Bess and Dee, 2008). This was not found to be the case regarding incentives in this study. While financial incentives make continued education more affordable, they do not imply a specific reward for higher degree attainment. Merit pay as defined in this study implies yearly financial compensation for higher degree attainment. It is important to also consider that incentives can stifle intrinsic motivation. The effects of incentives are dependent upon their design, and their interaction with intrinsic motivation (Gneezy et al., 2011).

This study did not account for changes to collective bargaining agreements over time. Raritan police had merit pay for college education at one time, but due to collective

bargaining, it has been revoked. It is unknown how many other agencies have lost or gained merit pay through collective bargaining over the span of the careers reflected in the study. The study also did not account for cultural factors that may be present within certain departments, which may cause officers to attain higher degrees regardless of available incentives.

Addressing Research Question 7: Does the level of education of the chief executive officer of rural police agencies in Hunterdon County, NJ influence the continuing education choices of officers within a police department?

In agencies where the CEO had at least a bachelor's degree, there was a statistically significant positive association with higher degree attainment. In a department with a college-educated CEO, the odds of attaining a higher degree were more than thirty-nine times more likely than for officers who did not have a college-educated CEO. This was significant to: $p < .003$

Addressing Research Question 8: How does rank (expressed as job classification) influence the continuing education choices officers at that specific rank?

Rank was a statistically significant predictor in three categories ($p < .05$): front line supervisor, mid-level manager, and executive level commander. At those ranks, the odds were 9.5 times, 45.9 times, and 15.8 times more likely to attain higher degrees.

Addressing Research Question #9: Does length of service influence continuing education choices in rural police agencies in Hunterdon County, NJ?

Length of service was not found to have a statistically significant impact on higher degree attainment. In other words, the amount of time an officer has served was

not a factor influencing higher degree attainment. This was somewhat surprising for two reasons. As officers retire, they often pursue second careers, and higher degree attainment would increase their appeal in the job market. Secondly, they have had more time than their younger counterparts to make decisions regarding their education, and therefore, it is surprising they do not continue their education at a higher rate than newer officers.

The Raritan Police Department is one of the larger departments in Hunterdon County, and also had the highest rate of higher degree attainment according to the organizational analysis captured in Table 1. To ensure results were not skewed by Raritan’s presence in the dataset, a second logistic regression was conducted. In the second regression, all Raritan officers were removed.

Analysis with Raritan removed from the dataset

Table 6 Model Summary without Raritan Police Department Data

<i>Model Summary</i>			
	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	47.430 ^a	.227	.461

a. Estimation terminated at iteration number 7 because parameter estimates changed by less than .001.

The Cox and Snell, and Nagelkerke pseudo r^2 mimics r^2 in OLS regression. The Cox and Snell R square is .227 while the Nagelkerke R square is .461. The fitted model with predictor variables accounts for between 22 and 46% of the variance in the dependent variable according to the pseudo r^2 results.

Table 7 Step 0 Classification Table without Raritan Police Department Data

Classification Table^{a,b}

		Predicted			
		Continued_Education		Percentage	
	Observed	.00	1.00	Correct	
Step 0	Continued_Education .00	101	0	100.0	
	1.00	12	0	.0	
Overall Percentage				89.4	

a. Constant is included in the model.

b. The cut value is .500

The Null model demonstrates how the data would be classified without predictor variables. The null model was correct in 89.4% of the cases because that share did not continue their education. None of the sample was predicted to continue in the null model because less than half the sample went on to attain a higher degree.

Table 8 Step 1 Classification Table without Raritan Police Department Data

Classification Table^a

		Predicted			
		Continued_Education		Percentage	
	Observed	.00	1.00	Correct	
Step 1	Continued_Education .00	98	3	97.0	
	1.00	7	5	41.7	
Overall Percentage				91.2	

a. The cut value is .500

The block 1 classification table accounts for predictor variables and how well it predicts the outcomes. The block 1 classification table was correct in 91.2% of cases. The block 1 classification table is an improvement of 1.8%% over the null model. The block 1

classification table correctly predicted higher degree attainment in five officers, and correctly predicted 98 who did not attain higher degrees.

Table 9 Logistic Regression without Raritan Police Department Data

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1 ^a	Tuition_Reimbursement	-.380	1.175	.105	1	.746	.684
	Incentive_Pay	-.115	1.082	.011	1	.916	.892
	College_Hiring_Stand	.800	1.073	.556	1	.456	2.224
	College_CEO	3.669	1.254	8.560	1	.003	39.198
	Time	-.013	.059	.048	1	.827	.987
	Front_Line	2.516	1.075	5.480	1	.019	12.373
	Mid_Manager	3.571	1.768	4.081	1	.043	35.537
	Executive	2.644	1.331	3.946	1	.047	14.074
Constant	-5.734	1.504	14.542	1	.000	.003	

a. Variable(s) entered on step 1: Tuition_Reimbursement, Incentive_Pay, College_Hiring_Standard, College_CEO, Time, Front_Line, Mid_Manager, Executive.

Table 9 shows the results of the binary logistic regression for attainment of a higher degree while removing Raritan Police from the dataset. Two predictor variables were determined to be statistically significant: presence of a college-educated CEO and rank. When Raritan data is removed from the dataset, the statistically significant predictors are the same as before. The strongest predictor of higher degree attainment was having a college-educated CEO. In departments where the CEO had a college degree, officers were 38.198 times more likely to attain a higher degree.

Rank was a statistically significant predictor ($p < .05$) in all three categories: front line supervisor, mid-level manager, and executive level commander. At those ranks, the officers were 11.3 times, 34.5 times, and 13.0 times more likely to attain higher degrees. The presence of Raritan Police in the dataset did not have an impact on which predictors were statistically significant. In each regression, having a college-educated CEO and

rank above patrol officer were statistically significant, and the exponents were similar. Therefore, it can be assumed that the data was not skewed by Raritan Township Police Department's presence in the dataset.

CHAPTER V: Findings, Conclusions, and Recommendations

Literature discussing the benefits of higher education and how postsecondary education impacts policing is abundant and clear. The profession of policing greatly benefits from having more college-educated officers. College education improves a broad range of skills, including communication, critical thinking, judgement, and reasoning thus facilitating desirable change in college-educated individuals (Pascarella and Terenzizi 1995). All of these skills are essential to the success of law enforcement officers. In addition, literature on policing suggests that college is directly beneficial to police agencies. College-educated officers are significantly less likely to use force than non-college-educated officers (Rydberg, 2010), which minimizes civil liability for police agencies. There is also evidence that hiring college-educated police officers presents challenges. It is therefore necessary to find ways to encourage police officers to continue their education throughout their careers.

I was unable to find any other study that attempted to identify factors associated with police officers attaining higher degrees. The framework of the study uses incentives identified in the Gardiner study. This study then builds upon the Gardiner study's descriptive statistics by attempting to identify factors that influence officers' pursuit of higher degrees. The purpose of this study was to identify factors influencing the continuing education choices of municipal police officers. This study intended to provide new information that may be of assistance for departments who wish to increase educational attainment within their organization.

In this chapter, I will discuss the findings, make recommendations for best practices for increasing educational attainment of police officers, and provide

conclusions. In addition, I will provide recommendations for future research and policy related to this study.

Population and Sample

The sample in this survey included the municipal police officers and police departments of Hunterdon County New Jersey. Hunterdon County is located in Western central New Jersey, and it is one of the state's more rural counties with a population of 125, 059 (2017 US Census Estimate). The population is 91.36% White, 2.69% Black, 0.13% Native American, 3.26% Asian, 0.03% Pacific Islander, and 1.22% other. The county's population is ranked 18th of 21 counties in New Jersey. All agencies in the study are non-civil service, which means they abide by their own hiring and promotional standards. All agencies in this study also engage in collective bargaining, which is common in New Jersey.

Findings

The aggregate data presented in the organizational analysis was a good indicator of the results of individual analysis. After reviewing the organizational data, a strong association was observed between having a college-educated CEO and higher degree attainment, but it was not clear if correlated would remain while controlling for other variables. It was not clear whether rank or length of service could be considered indicators based on the first phase of analysis. Binary logistic regression was used to test the impact of a variety of independent predictor variables on the dependent variable of higher degree attainment. The following independent predictor variables were tested, and the null hypothesis was either rejected or retained.

Tuition Reimbursement	Failed to reject
Incentive Pay	Failed to reject

College Hiring Standard	Failed to reject
College-Educated CEO	Rejected
Length of Service	Failed to reject
Job Classification	Rejected

The research questions in this study were centered around the impact of the predictors on higher degree attainment. Only two predictors were found to be statistically significant while controlling for other variables. CEO education was the strongest predictor of higher degree attainment. Job classification was also found to be a statistically significant predictor for front line supervisors and executive level commanders.

Tuition reimbursement, incentive pay, college hiring standard, and length of service were not statistically significant predictors ($p^{\text{tuition reimbursement}} = .728$, $p^{\text{incentive pay}} = .888$, $p^{\text{college hiring}} = .188$, and $p^{\text{time}} = .803$). The null hypothesis was rejected for job classification, as all job classifications were significant when compared to the constant of patrol officer where $p < .05$

The rejection of the null hypothesis for CEO education level and job classification show that these predictors have an influence on officers' choices to continue their education. It is not surprising that CEO education was a significant predictor of higher degree attainment based upon the aggregate data from the organizational analysis. It is also understandable that rank (which comes with higher pay) was a significant predictor. It was surprising that merit pay and tuition reimbursement were not statistically significant. The fact that some agencies pay for college and offer merit pay for higher degrees was not found to be a factor influencing the higher degree attainment of officers. This was the most surprising of the results.

Conclusions and Recommendations for Practice

The results of the binary logistic regression in this study showed that CEO education level and job classification above the rank of patrol officer had a statistically significant impact on officers' higher degree attainment. The null hypothesis was retained in the case of all other predictor variables.

After conducting this study, I have several recommendations for application in the field. Agencies who see the benefits of officers with higher education should place a priority on selecting college-educated CEOs. The literature review in this study highlighted the benefits of higher education in general and also as they relate to policing. If an agency wishes to reap these benefits, a college-educated CEO is a must. As a result of this study, the odds of higher degree attainment were over 39 times higher for officers who had a college-educated CEO.

If municipalities knew the significant impact a college-educated CEO can have on officers' continued education, they should be more likely to promote college graduates into CEO positions. None of the municipalities in this study require a higher degree for promotion than they do for initial employment. This information should be made available to municipalities who wish to improve the levels of education within their police agencies. In addition, training should be offered to officers who aspire to become police chiefs, detailing the impact their education can have on their organizations.

In the State of New Jersey, most police chiefs are promoted from within the ranks of the department; therefore, municipalities should place an emphasis on selecting college-educated CEOs. In other parts of the country where police chief positions are

open competition, the hiring agent should consider the benefits of higher education highlighted in this study.

As a result of this study, job classification was determined to be a factor influencing officers' pursuit of higher degrees. These officers have the motivation to be promoted, and may therefore use the same motivation to advance their education. Front line supervisors, mid-level managers, and executive commanders continued their education at a statistically significant rate compared to the constant of patrol officer. Patrol officers who exercise the motivation to continue their education should be identified by their agency and developed for promotion, as they are displaying the same habits as those individuals who have been promoted before them.

Merit pay and tuition reimbursement are attained through collective bargaining. I recommend that if officers are not using these incentives, that an agreement be reached to compensate the officers in other ways. If municipalities recognize the need for college-educated officers, they should promote officers who have attained college degrees to the upper ranks (because these officers continue their education at higher rates) which may influence higher degree attainment within the department.

Recommendations for Future Research

I recommend that a qualitative study be conducted to assess factors influencing the continuing education of municipal police officers. This quantitative study did not account for cultural factors that may exist in organizations and transcend the impact of predictor variables.

Future studies should also account for a more diverse population, taking demographic information of officers into account, and testing the effect of the predictor

variables against a variety of demographic factors. In addition to accounting for population diversity, agency diversity should also be explored.

This study used a population of officers in a rural part of the state, and cannot be said to be representative of policing in New Jersey nor in the United States. A study that uses a broader, more diverse population sample may yield more generalizable results.

After reviewing the aggregate data presented in the organizational analysis, it could be inferred that the results were disproportionately influenced by Raritan Township. They have the largest police force in the study, and also the highest level of continuing education. When a second regression was conducted without Raritan's officers the same predictors were significant; however, it would be interesting to see why Raritan is so successful with respect to continuing education. A qualitative study could be conducted to identify how Raritan Police successfully influence their officers to continue their education. This study did not address cultural elements within the sample that may influence continuing education choices. Cultural factors may be present in the Raritan Police Department that cause officers to continue their education. These lessons could be used as best practices for other departments to influence higher degree attainment.

Summary

As evidenced in Chapter II of this dissertation, the relevant literature extols the benefits of higher education, and in particular, the benefits of higher education in policing. Considering the benefits associated with higher education, it is important to understand why officers choose to continue their education.

Factors that may influence continuing education were presented by Christine Gardiner (2017). Based upon those factors, this study attempted to evaluate the impact of a series of predictor variables on higher degree attainment of municipal police officers while they are employed. Gardiner (2017) also highlighted some of the difficulties associated with hiring college graduates in policing, such as narrowing the applicant pool, and the higher salaries that college graduates command. This should not deter municipalities from hiring college graduates, because, as evidenced in Chapter II, the literature strongly suggests the benefits of higher education are worth the investment.

Some officers continue their education, and some do not. This study was designed to identify the factors influencing officers' decisions to attain higher degrees. The results of this study are significant because they can be used in the field to compel officers to continue their education.

Another goal of this study was to demonstrate to municipal governments that they can influence education and professionalism in their departments through the choices they make. Statistical analysis demonstrated that with a college-educated CEO, officers were 39 times more likely to continue their education. The choice to appoint college-educated CEOs often rests in the hands of municipal governments. Armed with this information, municipalities will be better equipped to make choices that enhance the professionalism of police in their communities.

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