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**Educational Level of Law Enforcement Officers and Frequency of Citizen
Complaints: A Systematic Review**

Submitted in part fulfilment of the requirements for the Master's Degree in Applied
Criminology and Police Management

January, 2011

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ACKNOWLEDGEMENT

I wish to express my gratitude to my program advisor, Dr. Barak Ariel, and to my thesis advisor, Dr. Cynthia Lum, both of whom provided guidance and concern above and beyond expectations. I would also like to thank Redlands Police Chief Jim Bueermann, who provided the opportunity to participate in this program.

I would also like to thank my wife, Amy Jean, who gave without hesitation, the unrelenting support this endeavour required. Lastly, I would like to thank my daughters, Emily, Greta, and Stella, who sacrificed unknowingly, countless nights and weekends with their father. I find solace in the hope that one day they will appreciate and emulate this example of life-long learning and a drive to make the world a little better place.

ABSTRACT

The belief that a law enforcement officer who holds a college degree will be a better officer has been the foundation for many policies in support of higher education for officers. However, there is a lack of overwhelming empirical evidence to support such a claim. Past literature has examined police performance in general as it relates to a number of different background characteristics, which include educational level. Citizen complaints are one type of measurement tool that arguably addresses the sensitive relationship between a law enforcement organisation and the community it serves. This systematic review identified 14 studies meeting inclusion and exclusion criteria, resulting in a total of 5359 subjects. By using meta-analytic procedures, this review attempted to identify and quantify the relationship between higher education and citizen complaints. The results provided a comprehensive picture of the overall relationship between education and citizen complaints, which produced a small statistically significant effect size. The effect was negative, indicating that education was predictive of fewer citizen complaints. Additional analyses were conducted to examine differences between large organisations and small to medium organisations as well as published studies compared to unpublished studies. Meta-analysis of the studies using large organisations and published studies revealed even greater effect sizes than the overall results while meta-analysis of small to medium sized organisations and unpublished works resulted in statistically insignificant smaller effect sizes. Police implications and suggestions for future research are discussed.

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CHAPTER 1: INTRODUCTION

A central component of modern day policing is the relationship between law enforcement officers and the citizens they are sworn to serve. This relationship is, in many respects, founded upon the concept of social consent, whereby police are given their power and authority to carry out their role as guardians of social order by consent of the people (Wilson 1999). The police are one of the few actual embodiments of organized government that citizens will interact with during the course of their daily life, therefore a continued understanding of this specific relationship warrants the attention of academics and practitioners.

The United States, with more than 17,000 different law enforcement agencies, has a difficult task when attempting to gauge the relationship of the agencies with the community. Other countries with more centralized forms of law enforcement benefit from the ability to conduct standardized satisfaction surveys of the public, which theoretically provide a means to gauge law enforcement's relationship with the community. An alternative means of examining the relationship of the police with the community is through examination of the frequency of citizen complaints. This review sets out to examine prior research involving the relationship between officer educational level and the number of citizen complaints filed against an officer.

Legitimate police power and authority is derived from an agreement between individuals to observe mutually convenient rules (Banton 1970). The police in the United States and other countries are empowered to enforce laws and use the amount of force necessary to do so. Every police officer who is armed with a gun, and is sworn to uphold the laws of the land, is essentially trusted with the power to take away a citizen's freedom

or even their life if the situation dictates. Fortunately the use of lethal force and life sentences are somewhat rare events, but the point is that officers are given tremendous power and discretion within the workings of society. Most police interactions with the public happen at a much more docile level and often do not involve any confrontation at all. Still, the way that officers interact with the public, even in non-confrontational situations, plays into a citizen's overall impression of government's legitimate right to govern. Within a given situation, what officers do or say, and the way that they do or say it are interpreted by citizens, and that interaction affects the integrity of the legal system as a whole. In order for citizens to interpret the law as just and credible, it is essential that police behaviour reflect high standards of fairness, reasonableness and decency. Police officers function most effectively when they do what they do with the moral consent of the community (Banton 1964). The fragile nature of the relationship between police and citizens gives great importance to continually seeking a greater understanding of police behaviour.

If one accepts the fact that the relationship between those who enforce the law and those who are governed by it is fragile, then all that can be done to preserve the relationship should be done. Government holds the more controllable position in the relationship since it is the government that regulates who actually becomes a police officer and how police officers should act. An ever increasing body of knowledge exists regarding police officer performance. Within this area of research, the background characteristics of police officers are a fairly consistent set of components that are addressed. These characteristics typically include age, sex, ethnicity, military experience, work experience, socio-economic status, years of experience, criminal and driving record,

and educational experience. The last of these, educational experience, is the focus of this systematic review. This component was chosen because arguably the college experience fosters several potential benefits for officers who will take part in this relationship with citizens in their community.

Any discussion of education and police work would be incomplete without discussing August Vollmer. August Vollmer, sometimes referred to as the Father of modern policing, created the first known formalized training for law enforcement in 1908 (Stevens 1999). Vollmer is credited with establishing the first police training facility at the University of California at Berkeley and with creating standardized police practices. It is from this point in time and through Vollmer's innovation and work that a movement began to explore the relationship between police officer education and performance. This movement resulted in several national committees and policies that are discussed in more detail later.

Even if Vollmer was able to establish a high educational standard for law enforcement nationally or internationally, there would likely be criticism based on what a college degree means. The educational system has changed tremendously over the past century and as a result of a wide variation in format and standards, the value of a degree is not standardized. The skills and qualities associated with a college education, and how they may impact policing, are discussed in more detail in the following literature review.

Vollmer undoubtedly made significant strides in improving police work, yet the question remains after a century as to what value a college degree holds in terms of police performance. This question has seen high and low points in public attention in the form

of various national commissions in the United States. Arguably, this issue garnered the most attention during the late 1960's on the heels of the Civil Rights movement. Higher education was seen as a means to stimulate change within both police organisations and police officers themselves. The assumptions were that a college educated officer would acquire qualities that would make them less susceptible to authoritarianism, discrimination and misconduct in various forms.

The hopes that a college education would be an impetus for change in the law enforcement community were largely based on intuition and reason as opposed to empirical evidence. A major positive outcome to the national attention given to this issue was an increase in the number of studies that addressed issues surrounding higher education and police performance. Unfortunately, the number in studies tapered off as national priorities shifted from police performance and changing organisations to issues, such as violence and narcotics that dominated the 1980's. Regardless, since the 1960's there has been an intermittent stream of studies examining various aspects of police performance. Unfortunately, many of the studies and particularly more recent studies are more often than not unpublished works done by individuals fulfilling masters and doctoral degree requirements.

National attention focused on raising the educational bar for police officers declined after the initial boom of the late 1960's and early 1970's. This could change in the near future as a result of the current economic situation. Many governments are now being forced to provide services for their communities with drastically reduced budgets because of the economic downturn of the last half of this decade. For many governments, public safety constitutes the largest component of annual costs. Within

public safety budgets themselves, the majority of costs are associated with personnel. Within the United States, there have already been drastic cuts to public safety personnel. Therefore, it has become a common mantra within organisations to “do more with less”. Although the current economic downturn has caused substantial cuts in law enforcement, jobs in law enforcement have remained highly sought after. The foreseeable future will likely produce many more applicants than available positions, because of increasing unemployment rates and a large number of eligible candidates. This affords law enforcement organisations the luxury of being more selective and finding more highly qualified police officer candidates. Thirty to forty years after the national committee’s pressure to increase the educational level of police officers, there could likely be another push in this direction given the combination of the economic downturn and a more educated populous looking for work.

The purpose of this thesis is to systematically review studies that recorded citizen complaints and the educational level of law enforcement officers. Complaints were chosen over performance measures because citizen complaints arguably address the fragile relationship between law enforcement and the community. Additionally, complaints represent an objective measurement generated by the citizens, who are essentially the client base of law enforcement organisations. Citizen complaints are generated from outside of the law enforcement community therefore have a greater potential to be a more objective performance measurement. Citizen complaints are theoretically more devoid of organisational politics that could effect other police performance measurements such as; supervisor ratings, peer ratings, and police academy performance. A number of issues surround standard practices involved with the citizen

complaint processes, but one would logically assume that the complaint processes are somewhat standardized within each law enforcement organisation. Citizen complaints are but one of many performance measures for law enforcement personnel, but given the delicate nature of the relationship between law enforcement and the community, it is an essential output. The aim of this systematic review is to synthesize available research evidence on the impact of an officer's college education with regard to the outcome of citizen complaints. The emphasis of the following literature review is on the history of higher education and law enforcement, the competencies associated with higher education, education and police officer performance, and issues concerning citizen complaints.

CHAPTER 2: LITERATURE REVIEW

The literature review begins with a brief history of the relationship between higher education and law enforcement that has spanned many years and has been the source of many national commissions on police reform. An exploration of outcomes typically associated with a college education follows, in an attempt to better understand what changes within a person as a result of the higher education experience. The next section includes a more specific focus on the relationship between education and police officer performance. Police officer performance is a general concept. Many background factors can affect performance outcomes, and education is one such factor. The literature review concludes with a discussion of several issues pertaining to the specific outcome measurement in literature examined, citizen complaints.

2.1: History of Higher Education and Law Enforcement

The process of enforcing laws existed before the development of the profession of law enforcement as we know it today. Zedner (2006) noted that the concept of policing predates the work carried out by state officers. Even with a long legacy of policing, modern day law enforcement agencies must adapt to a world that is evolving very quickly. Advances, particularly in the area of technology and communications, have changed our ever shrinking world community at an alarming rate. Police officers are required to be able to think critically because of the many challenges that face them such as ethnic and racial diversity, increased outside scrutiny of police practices, and the added responsibilities from homeland security (Bueermann 2006).

Changes in the police role, new developments in technology, and community demographics have prompted a rethinking of the need for higher education within law enforcement. One of the ways law enforcement agencies have adapted to these changes has been to transition from more traditional paramilitary hierarchies to structures emphasizing network-type communications and flexibility (Harvey 1996). These represent some recent changes for law enforcement, which is perpetually reacting to an ever changing society. Adaptation is nothing new to policing, and it is arguably the reason why society seems to go through ebbs and flows with different types of reform such as increased education for police officers.

As far back as 1920, the focal point of most problems with law enforcement was personnel (Fosdick, 1920). Fogelson (1977) pointed out that police personnel during the early 20th century were typically underpaid, undereducated, and of below average intelligence. These characteristics, coupled with the fact that many officers would work well into their seventies and eighties, meant that police officers were unqualified when they started and remained so for a long time (Fogelson 1977).

For approximately 100 years, scholars have studied the impact of education on both police practice and police performance (Finckenauer 2005). It has also been about 100 years since August Vollmer began to make tremendous strides towards hiring more educated and intelligent police officers. Vollmer was the police chief of Berkley, California. But besides being chief of police, Vollmer became a major force and advocate for police reform and particularly for increased educational standards for officers (Wilson 1953). It was Vollmer's belief that the problems of policing would fade away if society could get what he referred to as truly exceptional men (Vollmer 1936). Vollmer went on

to define those truly exceptional men as those who possessed superior intellectual, physical and character qualities. Vollmer (1936) thought that, with qualities like these, officers would be better able to command respect from not only their associates but the general public as well.

At the centre of Vollmer's drive to professionalize law enforcement was higher education, which he thought would give police officers increased social status and dignity (Carte and Carte 1975). Vollmer thought that a bachelor's degree should be a minimum requirement for police recruits since, in his opinion, an ideal officer should first have academic training and then be taught the technical aspects of police work (Carte and Carte 1975). This point was reiterated by Sherman et al. (1978) in their recommendations stemming from the National Advisory Commission on Higher Education for Police Officers, recommendation 7-1, "Police departments should place less emphasis on educating the recruited and more emphasis on recruiting the educated" (p.13).

Vollmer's concept of a highly educated police workforce was in stark contrast to how the first modern civilian police force in London chose their typical constable approximately a century before. The typical constable of the early 19th century was chosen to be as much like the lower classes as possible because they were intended to police the lower class (Critchley 1972). In contrast, Vollmer thought that each officer should be the chief of his area, and that a college degree would facilitate an officer's ability to act independently in serving the individual needs of their communities (Carte and Carte 1975).

Vollmer was successful in bringing attention to the issues of police reform that have had various turns in the national spotlight. Over the past century, there have been a number of national panels in the United States that reflected Vollmer's ideas. The first was the Wickersham Commission of 1931. The commission argued that widespread police misconduct was due in no small part to the lack of education and training of patrol officers and chiefs (Wickersham Commission 1931). The commission discussed the state of police education, which at that time included the startling fact that more than 50% of officers working for the Los Angeles Police Department did not have a high school diploma. As a result of some of the recommendations of the Wickersham Commission, Vollmer helped to develop the first school of criminology at the University of California at Berkeley and influenced several other schools on the west coast of the United States to begin teaching police and criminology classes (Wilson 1953).

Although Vollmer's idea of higher education for all officers did not become a reality in his lifetime, the idea gained momentum again in the 1960's. Sherman et al. (1978) pointed out that social conflicts and rising crime of the 1960's pushed police reform back into the national spotlight. Many of the same problems the police faced earlier in the 20th century were addressed again by several subsequent presidential commissions including; the National Commission on the Causes and Prevention of Violence, the President's Commission on Campus Unrest, and the National Advisory Commission on Criminal Justice Standards and Goals (Sherman et al. 1978).

Sherman et al. (1978) noted that the most influential proponent of the idea of higher education came from the President's Commission on Law Enforcement Administration of Justice (1967), which recommended that as an ultimate aim, all police

officers with general enforcement powers have baccalaureate degrees. This commission also recommended that immediate steps should be taken to gradually increase educational requirements for both new recruits and promotions (President's Commission on Law Enforcement Administration of Justice 1967). The argument for this recommendation was that the complexity of police work is so great that higher educational requirements are necessary for improving the quality of police work (President's Commission on Law Enforcement Administration of Justice 1967). Additional arguments came from the National Advisory Commission on Criminal Justice Standards and Goals (1973) stating that, in years past, a high school diploma was a relatively high level of education but it no longer held the same value. Furthermore, setting minimum recruiting standards at the level of a high school diploma could increase mediocrity and the general belief that almost anyone could be a police officer. Some believe that as the general population becomes more intelligent and educated, police officers should have or exceed the educational level of the average citizen they are sworn to serve (Aamodt 2004).

Saunders' (1970) clearly articulated reasons for supporting higher education for law enforcement officers:

“The qualities which law enforcement leaders claim to look for in recruits are the very ones which liberal education is believed to nurture: knowledge of changing social, economic, and political conditions; understanding of human behaviour; and the ability to communicate; together with the assumption of certain moral values, habits of mind, and qualities of self-discipline which are important in sustaining a commitment to public service” (p 82-83).

This sentiment was later reiterated by the American Bar Association's Advisory Committee on the Urban Police Function (1973).

Although many arguments have been made for the increase of police officer educational level, there was little scientific support for the claims. Telep (2008) pointed out that the conclusions of many national commissions were based on the intuitive logic that officers with a higher education would make better officers, but the reports and commissions utilized very little empirical evidence to illustrate how a college education made a difference.

The current state of higher education requirements within law enforcement organisations illustrates the lack of progress various commissions have had in increasing higher education in police work. Even though there have been several pushes for education, most law enforcement organisations continue to operate with the minimum educational requirement of a high school diploma (Paoline and Terrill 2007). A little over a decade ago, Baro and Burlingame (1999) observed that only 1% of local law enforcement agencies required a 4-year college degree, and 75% of the agencies had no formal policy linking education with promotion. Hickman and Reaves (2006) noted that only 1% of local police departments in the United States require a 4-year college degree. The vast majority of local police departments, approximately 90%, only require a high school diploma or its equivalent (Bruns 2005). Despite these lax requirements by law enforcement agencies, approximately half of all officers in the United States have some form of college education (Polk and Armstrong 2001).

2.2: Educational Outcomes

The organisational value of a college education for police officers is evidenced by its importance in hiring, pay increases, and promotional merit. Even with the positive reinforcement associated with the attainment of a college degree, the question remains of what value that degree actually brings to an employee or the law enforcement organisation as a whole. A multitude of questions arise in any discussion when addressing the value of higher education in any workplace. In this section, the mechanisms that potentially link the college experience to some sort of attitudinal or behavioural change are explored. This leads into some important questions pertaining to the attainment of some core set of competencies or skills expected by college graduates. This section then identifies and explores the different stakeholders of higher education, namely students, parents, faculties and schools, and finally employers. Each of these stakeholders brings a slightly different perspective to outcomes of higher education. In addition to these factors, there is also the issue of the changing face and quality of higher education, particularly with the expansion of online programs and for-profit degree granting institutions that cater to a rapidly growing student demographic of adult learners.

In Telep's (2008) work on the impact of higher education on police officer attitudes towards the abuse of authority, considerable attention was brought to the importance of a college education. Although this systematic review addresses an observable performance outcome, one would logically assume that the underlying behaviour of officers who receive citizen complaints is predicated by police officers' attitudes. Telep (2008) began by discussing Durkheim's position that education is necessary for the promotion of a moral society (Durkheim 1956). Durkheim (1961)

further described morality as consisting of a combination of discipline, attachment to the group, and autonomy. Discipline is defined as consistent conduct and response to authority. Attachment to the group is defined as actions oriented toward the greater good of society. Autonomy is defined as individuals acting with knowledge of the consequences of various actions. These three aspects of morality fit directly into the application of police work which is hallmarked by a great deal of autonomy, connection to a group or sub-culture, all influenced by individual discipline. If higher education instils morality, one would expect officers with more education to have attitudes in favour of lawful conduct that is consistent with departmental and legal standards (Telep 2008).

If there is to be value associated with a college degree, there would logically be some baseline set of qualities or competencies that result from that educational experience. Allen et al. (2005) defined competencies as prerequisites for effective action that are formed from knowledge, skills and motivations. Competencies have also been defined as the individuals' characteristics that allow them to perform effectively in a given situation (Spencer and Spencer 1993). It is also important to distinguish between specific competencies and general competencies, since it is the later that are thought to be a more universal result of higher education. Specific competencies are clusters of cognitive prerequisites that students need to be able to perform effectively in a specific area (Weinert 2001). These types of competencies are thought to lose value over time because of changes in technology and labor demands (Allen et al. 2005). General competencies, on the other hand, encompass a much broader framework and are more resilient. General competencies can be applied to a large range of contexts and are

viewed as more valuable in terms of employability (Allen et al. 2005). Allen et al. (2005) further state that some general competencies relate directly to productivity in several different contexts and also help individuals to utilize already acquired specific competencies in new work situations.

According to Diamond (1997), the answers to what competencies are associated with higher education have been fairly consistent. Core competencies generally include; effective reading, writing, speaking and listening communication skills; mathematics, problem solving, and critical thinking skills; interpersonal skills such as collaboration with others and leadership; computer literacy; appreciation for cultural diversity and adaptation to change. Patterson and Bell (2001) discuss key competencies that were the result of the Finn Report of 1991, the Carmichael report of 1992 and the Mayer Committee report in 1992, all from Australia. The seven key competencies identified from these reports were the ability to locate and use information, communicate effectively with others, plan and organise one's work activities, interact effectively with other people, use mathematical ideas, apply problem solving strategies in purposeful ways, and apply technology.

It is important to also understand that a difference exists between what different stakeholders see as the core competencies of college graduates. Coll and Zegwald (2006) conducted a study to examine perceived competencies of college graduates, specifically science and technology students, through varying perspectives of identified stakeholders. Those stakeholders were current students, recent graduates, employers and faculty. As a result of their work, Coll and Zegwald (2006) found that current students' top five ranked competencies were ability and willingness to learn, initiative, achievement orientation,

personal planning and organisational skills and analytical thinking in descending order. Recent graduates ranked the top college graduate competencies as ability and willingness to learn, teamwork and cooperation, analytical thinking, personal planning and organisation and computer literacy. Employers ranked the competencies as ability and willingness to learn, teamwork and cooperation, initiative and analytical thinking. The faculty ranked the competencies as ability and willingness to learn, written communication, analytical thinking, computer literacy, and teamwork and cooperation. The fact that Coll and Zegwald's study focused on a certain type of student is less important than the fact that there are different stakeholders with different perspectives that arrive at similar yet not exact conclusions about the outputs of a college education. These differences illustrate that competencies associated with a college degree are dynamic. There is not a unanimously agreed upon set of competencies associated with a college graduate since goals and objectives are set by various stakeholders, often times with different perspectives.

Not only are there discrepancies in expectations, there is also an underlying resistance from universities to measure outcomes such as core competencies of their graduates. The value of higher education in policing is difficult to measure in part because of the performance metrics used in higher education. Historically there has been a focus on inputs and processes of the educational system as opposed to final goals or desired outputs (Allen et al. 2005). Colleges and universities are often measured by indirect means such as; the degrees held by faculty, publication of faculty, the number of grants received by the institution (Diamond 1997). These measurements arguably have little to do with the learning environment of the student body. The unfortunate truth is

that these indirect performance metrics allow schools to avoid becoming accountable to how well they meet their goals of educating students and preparing them for the real world (Diamond 1997). Allen et al. (2005) argue that higher education courses best demonstrate their value through the ability of their students to perform in the real world. Hickok (2006) questions whether a college degree is proof of a college education and cites studies highlighting higher education's ever increasing costs, uneven quality, low graduation rates, and even declining reading and comprehension scores. Colleges need to develop accurate measures for student achievement and, more broadly, the value of a higher education (Hickok 2006). This reasoning is what is driving the shift of outcome measurements in education from exam scores to competencies (Allen et al. 2005).

If the process of attaining an education is to be valued within the law enforcement community, at the very least there should be more attention given to student performance measurements before and after the educational experience. Cascio (1977) described one logical criticism that the educational levels of police officers are likely confounded by intelligence and motivation. There is typically a public perception that a student that graduated from Harvard or Cambridge will have had a better educational experience and be better prepared for the workplace than one who went to a low ranking university. A logical explanation is that a student who qualifies to go to a prestigious university such as Harvard would probably already possess the core competencies discussed earlier; therefore the university might have had less to do with the person's performance after graduation. Officers who put themselves in a position to obtain a degree might be more intelligent and motivated than high school educated colleagues and therefore it is the effect of intelligence and motivation as opposed to education that differentiates the level

of performance. If students already possessed intelligence and motivation, would an alternate life path such as serving in the military or transitioning directly into the workplace mean they were less prepared for their career if the value of the education was based on core competencies and not specific or technical competencies?

Although universities might be slow at adopting the concept of outcome measures, employers are demanding outcomes. Gedye et al. (2004) noted that, in the United Kingdom and other countries, there is increasing pressure from businesses for universities to produce graduates having more 'employability'. Employability is defined by Little (2003, p.1) as a "set of achievements, understandings and personal attributes that make individuals more likely to gain employment and be successful in their chosen occupations." This concept of employability is clearly linked to the ever changing job market.

Western economies are becoming more and more based on knowledge, information, and communication as opposed to physical production (Gedye et al. 2004). Harvey et al. (1997) pointed out that, in order to be successful in this type of knowledge driven economy, a highly educated workforce is essential. It is the human capital of competencies in the form of talents, skills, and capabilities of college graduates that are key to sustainable economic growth and development in this more globalized economy (Sianesi and Van Reenan 2003). In response to changes in our world, such as globalization and the digital revolution, employees can no longer expect their jobs to stay the same. Graduates will need to have knowledge, intellect, flexibility and adaptability in order to succeed (Gedye et al. 2004). It is likely that lifelong learning skills will take a prominent position among employees' portfolios since it will be more common than ever

to have people change careers during their life. Even if they do not change careers, it is likely that the job they have will evolve rapidly requiring the same level of adaptability (Harvey et al. 1997). Marra and Palmer (2004) point out that, because of the rapidly changing nature of knowledge across all areas of study, the best indication of a successful college education is the ability of the student to reason in context, digest and evaluate multiple sources of evidence, and apply those skills by thinking complexly when necessary to solve difficult problems. A general ability to solve problems in this way will become a hallmark of a good college education.

Therefore, if one accepts that the duties of law enforcement officers have evolved and will continue to evolve and that officers with a higher education are sought after for these positions, the question then becomes whether the assumed skills attained through the process of obtaining a degree actually affect an officer's performance. A college education should prepare students to succeed in a variety of situations and occupations. Buerger (2004) emphasizes that the process of education is not so much a transfer of facts as it is a skill development regarding learning how to learn. Some of these skills are the critical assessment of new situations, undertaking new learning, and questioning underlying assumptions of existing knowledge. Higher education has also been viewed as benefitting critical thinking, problem solving, and the greater exercise of discretion (Baro and Burlingame 1999). These skills are seen as general increases in aptitude, or the increased capacity for learning. Individuals can later apply the specifics of a certain job to a broadened world perspective (Molden 1999). It is then the framework or foundation that is seen as the advantage of a college education as opposed to the specific knowledge areas covered.

Cultural sensitivity is an additional benefit commonly associated with higher education and could also impact citizen complaints about police officers. Tension between minority groups and the police has been described in the past as one of the most serious problems facing law enforcement organisations (Walker 1992). American businesses in general have seen increases in the diversity of not only their customer base but of their own workforce, and these trends are expected to continue (James 2006). With cultural diversity increasing, particularly in the United States, police officers would logically benefit from any process that adds to the sensitivity of this issue. Unfortunately, law enforcement agencies currently fall short of a program of cultural diversity that would leave a lasting impression. A typical 8-hour police training module on cultural diversity cannot be expected to have the same lasting impression as the exposure to diversity that the typical college education offers (Buerger 2004). Pascarella and Terenzini (2005) view college as a key in the development of one's sense of self and the growth that takes place during these years helps foster an appreciation for the roles of other people. The idea of the development of self was also supported by Feldman and Newcomb (1994) who viewed the college experience as a type of re-socialization based on exposure to a new and diverse set of ideas, friends, and beliefs. These new experiences cause college students to become more aware and concerned about the world they live in, which in turn helps to serve as a basis for learning how to effectively interact with other people (Feldman and Newcomb 1994). It is this effective interaction with other people that is central to the hypothesis that a police officer with a higher education might interact with people with a higher frequency of acceptable resolution.

In summary, several arguments highlight the benefits of a college education. Many different perspectives have been offered for what should be the expected output of a college education. Since higher education is not a wide spread requirement in law enforcement, the question of its relevance to police performance remains. This area is explored in more detail in the next section.

2.3: Education and Police Officer Performance

Law enforcement agencies vary tremendously with regard to how they measure and evaluate their officers' performance. Both law enforcement managers and the public are tasked with understanding how the public value of a particular agency can be assessed (Moore & Braga, 2004). There seems to be a discrepancy with regard to what performance measures are important at both the individual officer level and law enforcement agency level. Cascio (1977) made this point when, speaking about education specifically, he explained that the most obvious reason why the question of whether better educated people make better officers has not been definitively answered is that there is little agreement as to what constitutes effective police officer performance. Even if there was some sort of consensus as to what constitutes good police officer performance, there are significant barriers in collecting the necessary data. Often data exist but are spread throughout organisations' various types of files and are not systematically collected in a format that would allow analyzation of different predictor or criterion data (Cascio 1977).

Aamodt (2004), in his research on law enforcement selection, found that over the past two decades there have been several attempts to justify increased educational

requirements and that these attempts are supported by four general categories: case law, qualitative studies, empirical research, and studies focusing on characteristics of police officers. Although case law is important within the context of society, the fact that an argument was made for one thing or another is far from any evidence resulting from scientific study.

Aamodt (2004) cited several qualitative research studies regarding the importance of education in law enforcement (Buracker 1977, Gross 1973, Miller and Fry 1978, Tucker and Hyder 1978, Geary 1970, and Walker 1994). Buracker (1977) examined advantages and disadvantages of educational requirements and ultimately called for more research on the topic. Several of the studies looked at the need for a college degree (Gross 1973, Miller and Fry 1978, Tucker and Hyder 1978). Geary (1970) provided support for education as a result of his study in Ventura, California where after implementing a bachelor's degree requirement, not only did the crime rate go down but also police officer turnover was reduced. Walker (1994) produced a recommendation for large agencies to require an associate's degree upon hire and a bachelor's degree within five years as a result of his study.

Aamodt (2004) looked at several studies that utilized empirical research to investigate the relationship between education and police performance (Finnigan 1976, Weirman 1978, Daniel 1982, Worden 1990, Reming 1988, and Smith and Ostrom 1974). Finnigan's (1976) study of the Baltimore Police Department found positive relationships between education and police performance also looking at differences in different types of majors. Many authors looked at police academy performance and education including Weirman (1978) who found that officers with an associates degree or higher performed

better in the police academy than those with only a high school degree. Looking at another performance measure, absenteeism, Daniel (1982) found that officers with only a high school diploma had more than twice the number of absences than their colleagues with a college degree. Not all studies report favourable differences between college-educated police officers and non college-educated officers. Worden (1990) found no differences in police-citizen encounters with regard to education level of officers. Reming (1988), in his study of supercops and average cops, found no educational difference. And Smith and Ostrom (1974) found no positive correlation between education and police attitudes.

Some researchers have looked specifically at certain desirable police officer characteristics and how they differ between educated officers and less educated officers (Aamodt 2004). Several studies found that college educated officers are less authoritarian and dogmatic (Dalley 1975, Dorsey 1994, Genz and Lester 1977, Goldstein 1977, Felman and Newcomb 1969, Roberg 1978, and Smith et al. 1970). Finckenauer (1975) found that college-educated officers use better discretion. Scott (1986) found that college educated officers communicate better. Some studies showed that college educated officers write better reports (Michals and Higgins 1994, Smith and Aamodt 1997). And Ferrell (1994) found that college educated officers were more positive about community policing issues than their less educated colleagues.

Although there is a growing body of knowledge regarding police performance, there remains a level of uncertainty regarding the effect of a college education. Skogen and Frydl (2004) pointed out that many of the previous studies were not as influential because of a lack of methodological rigor. These studies also typically utilized

inadequate samples and suffered from the inability to control for theoretically relevant variables identified by the National Academics Panel on Police Policy and Performance (Skogen and Frydl 2004). Although some research suggests that police officers with a college education behave differently than those without a college degree, there is inconsistency with regard to the direction of education's impact on police behaviour (Ryberg and Terrill 2010).

From a practitioner's perspective, the simple question of whether officers with a higher education perform better is difficult to answer. Sources of information regarding this topic are not presented in a fashion that gives practitioners an overall support for higher education for officers. The performance outcome of citizen complaints is but one of many possible performance measures, but because the tasks and duties of officers varies so much, it is necessary to single out performance measures as much as possible in order to ascertain any relationships.

2.4: Issues Surrounding Citizen Complaints

The literature review section on educational outcomes addressed several positive outcomes from higher education that could impact the way that a police officer with a higher education interacts with people. Since it is typically the interaction with citizens that causes a citizen to initiate the complaint, there might be a relationship between an officer level of education and the frequency of citizen complaints. In this section, the issues surrounding citizen complaints are discussed in further detail.

A number of cities have found themselves in the midst of controversy stemming from allegations of police misconduct and excessive use of force (Walker et al. 2002).

One need only think of the riots in Los Angeles after the acquittals of police officers charged in the beating of Rodney King as a testament to how controversial and volatile this topic can be. Such an example of excessive force by a law enforcement agency can devastate the agency's relationship with the public and negate any goodwill fostered by extensive efforts through community oriented policing initiatives (Brandl et al. 2001). The legitimacy of an entire organisation can be called into question by a single incident of this type (Sholnick and Fyfe 1993). Also the manner in which law enforcement organisations process and resolve complaints, which often times reveal police activities that cause the most concern for community members, influences community relations (Johnson 1998). Johnson (1998) also argues that communities that hold the perception that their law enforcement agencies fail to adequately recognize and respond to their citizen complaints fairly will view the police as opponents as opposed to partners. This is a primary reason why citizen complaints should be of great concern for police administrators.

Police misconduct in the United States has, on several occasions, been the focus of national consideration. Most notably, the following commissions and forums addressed in some form the issues surrounding police misconduct: the National Commission on Law Observance (1931), the United States Commission on Civil Rights (1961), the President's Commission on Law Enforcement and Administration of Justice (1967), the National Advisory Commission on Civil Disorders (1968), the National Advisory Commission on Criminal Justice Standards and Goals (1973), the Police Executive Research Forum (1981), and the United States Commission on Civil Rights (1981). In spite of these commissions and the resulting improvements in policing,

allegations of racial discrimination and excessive use of force continue to entangle law enforcement agencies in the United States (Walker 2001). Several of these commissions suggested that an increase in the educational level of officers was needed as part of the foundational change necessary for police reform.

It is important when exploring citizen complaints and police behaviour in general to first have a concept of what environment and roles police officer find themselves. Present day police officers are primarily peace keepers and problem solvers as opposed to crime fighters (Walker et al. 2002). Officers on the street deal with many obnoxious and volatile situations that citizens cannot or will not handle themselves (Bittner 1990, Goldstein 1977). As a practitioner, this author has experienced first hand that most calls for service that law enforcement officers respond to are strewn with emotion, frustration, anger, and pain. Citizens simply do not call for police services when things are going well. Because of this dynamic, both suspects and victims frequently direct some hostility toward police officers who are tasked with bringing order to chaotic situations.

Police officer discretion is a key concept involved in the behaviour of police and their interaction with the hostile environments they find themselves in. Bittner (1970) differentiated the police occupation from all others in that a core function of the job afforded officers the ability to use essentially unrestricted force. It is exactly this issue that constitutes the central problem of contemporary police misconduct (Pate and Fridel 1993, Kerstetter 1985). Goldstein (1959) also described routine police work as being a low visibility activity because most officers work alone or in pairs without direct supervision. Because of this, officers are almost always able to use their discretion in handling situations they encounter. This situation creates opportunities for officers to

bend or break rules and laws if they choose (Walker et al. 2002). As previously discussed, Durkheim's work identifies discipline and autonomy as components of morality, which are both enhanced by education in his opinion (Durkheim 1961). Additionally, this aspect of low visibility has a significant role in the discussion of citizen complaints because in the absence of corroborating evidence like witnesses or medical records, it is extremely difficult to substantiate an allegation of misconduct (Walker 2001). This inability to confirm or deny misconduct allegations could leave both the person making the complaint and the officer with a lack of closure to an incident.

The types of citizen complaints can vary tremendously in law enforcement. The way that order is restored from chaos can run the gamut from mere presence of the officer to an officer using lethal force. It is within this wide spectrum of interactions that law enforcement officers are subject to citizen complaints. A great deal of attention follows police use of force, but according to the Bureau of Justice Statistics (2001), law enforcement officers only use force in about one percent of all encounters with the public. It is estimated that the circumstances of a given situation justified the level of force used by officers in two thirds of use of force incidents, leaving about one third falling within the realm of excessive and or unjustified force (Reiss 1968, Worden 1995).

There has been vast amount of public and media attention given to instances of excessive force by police officers even though such allegations only account for a fraction of citizen complaints. Unfortunately, it is the perception of misconduct rather than empirical evidence that has sustained this issue in the United States for several decades (Walker et al. 2002). Many studies have also focused on police use of force, and more specifically excessive force, but in actuality it is other behaviours like rudeness,

discourtesy, racial or derogatory comments, or failure to provide adequate service that compose the majority of citizen complaints (Minneapolis Civilian Review Authority 2000). Landau (1994) conducted a study of the Metropolitan Toronto Police Force with regard to citizen complaints. As a result of her inquiries, she learned that 32% of complaints involved allegations of verbal abuse in the form of incivility, rudeness, sarcasm, racist or discriminatory remarks; 29% of complaints involved allegations of unprofessional conduct such as unprofessional uniform or lying; 49% of complaints involved allegations of improper police behaviour such as stopping someone without reason, unlawful search, or arrest without charging; 25% involved allegations of neglect of duties such as failing to identify oneself as a police officer, poor investigations or inadequate response to request for assistance; and 34% of complaints involved allegations of physical abuse. Even though these less serious forms of police misconduct are more prevalent, they are still estimated to be a low representation of complaints in general because citizens tend to not bring these types of complaints forward (Walker 2001).

Terrill (1991) noted that in years past, the focus on misconduct related to behaviour was either obviously criminal or relating to the violation of a citizen's civil and or constitutional rights. Sensitivity to these issues prompted various components of the justice system, namely prosecutors, grand juries, judges, and police to take a more proactive stance towards misconduct and begin to establish a form of hierarchical accountability (Terrill 1991, Terrill 1988). This being the case, the processes involved with citizen complaints are fairly convoluted in the United States and data corresponding to this outcome should be viewed with caution.

A source of the problem surrounding the convoluted nature of complaint systems is in the diversity and sheer number of different law enforcement agencies in the United States. The United States has in excess of 17,000 different law enforcement agencies, and most of those will have their own set of stakeholders, leaders, policies, and cultures. Different policies and procedures can influence the number of complaints a given organisation receives (Hickman 2006, McEwen 1996). Citizens can be encouraged or discouraged from making complaints by either deliberate or hap-hazard design by law enforcement agencies (McEwen 1996). It was not until the 1960s that most law enforcement agencies put formal procedures in place to receive and investigate citizen complaints (the President's Commission on Law Enforcement and Administration of Justice 1967). Some departments make their complaint procedure more readily accessible to the public than others, and some departments are more prone to seek informal rather than formal complaint processes (Hickman 2006). In the early 1990s, the Christopher Commission (1991) found that the Los Angeles Police Department still engaged in the practice of turning away citizens who came into station houses to complain, sometimes even going so far as threatening to arrest the potential complaint maker. There exists a widespread perception among racial and ethnic minority citizens that police administered citizen complaint procedures simply do not address their problems (Walker et al. 2002). These and other differences in these organisations can affect the number and rate of citizen complaints against officers.

The legitimacy of complaints filed is another factor warranting concern when discussing variation of citizen complaint data (McEwen 1996). There are obvious reasons why someone who has been arrested by a police officer would want to file a

complaint against the officer. Terril and McCluskey (2002) discuss several issues surrounding the various meanings of citizen complaints. Terril and McCluskey began by arguing that citizen complaints do not indicate much of anything with regard to officer behaviour because they are so unreliable. Two sources for this unreliability stem from the fact that most citizens are unlikely to be informed as to acceptable operating procedures for the police and secondly that the complaint might have less to do with officer behaviour than it has to do with the fact that the citizen was likely the subject of what that behaviour was, namely an arrest. Citizens might want to get back at an officer because they don't understand why they were arrested or they blame the officer for their arrest. Another argument about the reliability of citizen complaint data is that of productivity. It has been argued that officers that generate high levels or frequencies of citizen complaints are simply doing so because they are more productive (Lersch and Mieczkowski 1996, Wagner and Decker 1997). Supporting this position is the logical reasoning that the best way to avoid a complaint is to refrain from police work or avoid situations that might lead to a complaint (Muir 1977, Willing 1999). This author argues that another set of citizens simply like the attention they get by the process, yet others see their complaint as possible grounds for litigation and financial settlement since many larger organisations would rather settle than spend time and effort fighting an allegation.

Citizen complaints are far from being an objective performance measurement outcome but the source of their initiation, the citizens, makes this measurement different than many others. Citizen complaints theoretically are a function of the way that the general public is treated by police personnel. Many of the traits associated with higher

education are related to how someone views the world and interacts with others. For these reasons, citizen complaints were chosen as the focus of this systematic review.

2.5: Literature Review Summary

This systematic review set out to provide a foundation for issues surrounding higher education, law enforcement, police officer performance, and specifically citizen complaints. Based on this literature, it is apparent that over the past century, policy makers and law enforcement leaders have periodically looked to education to act as a mechanism for police reform. There are many aspects of police performance to which there has been some support for officers having a college degree. Some of the key benefits of a college education with regard to the specific question of citizen complaints are increased development of morality, autonomy, discipline, as well as better communication skills and tolerance for diversity. These qualities would seem to affect police officers interactions with the public and would lead one to believe that there would be a negative correlation between educational level and frequency of citizen complaints. The remainder of this study is an attempt to present available empirical knowledge on this specific research question.

CHAPTER 3: METHODOLOGY

3.1: Objectives of the Review

The objective of this review was to synthesize the empirical evidence, both published and unpublished, on the relationship between the education level of individual police officers and the frequency of citizen complaints received by those officers.

Specifically, this review attempted to answer the following question: Does educational level affect whether officers are more or less prone to citizens filing complaints against them?

3.2: Meta-Analysis

Previous studies on police performance and higher education, which were highlighted in the literature review, have suggested varying results that often supported education for police officers. Although results of these studies generally support higher education, there are studies that find little positive support for officers having higher education. Given the mixed results found in the literature on the relationship between education and performance, there is an increased need to meta-analytically review the existing evidence.

Many police performance outcomes and several other officer characteristics or variables have been recorded in past research, but given the time, space, and resource constraints of this thesis, only the specific relationship between an officer's level of education and the frequency of citizen complaints was reviewed. The outcome variable of choice was the citizen complaint. Many studies that included the details of police officers level of higher education and citizen complaints also examined other variables

and other outcomes. To the extent possible with each study meeting inclusion criteria, other recorded variables such as, length of service, assignment, rank, or sex were recorded. Similarly, other performance outcomes will also be recorded. These additional performance measures might have included such things as number of arrests, uses of force, promotions, or commendations.

Meta-analysis is a statistical technique for amalgamating, summarising, and reviewing previous quantitative research. Meta-analysis can help: to summarize the results of a particular research area, to study how findings vary as a function of key characteristics of the studies review, to offer recommendations for improvement, and to develop implications for policy makers and practitioners from the research. Meta-analyses tend to have a more narrowed focus than other types of reviews. They have a strong quantitative component that attempts to bring together in a statistically valid format the quantitative results of several studies in order to provide a more precise estimate of effect than is possible by using a single study. Meta-analysis is arguably more appropriate than narrative reviews when there are more than a small number of studies. Narrative reviews rely on subjective interpretations of the researchers or experts; meta-analysis utilizes objective formulas and can be used with any number of studies. Meta-analysis is often done when there appears to be inconsistency among several studies' results or when there may be an important main or subgroup effect that is too small to be measured accurately through single studies (Goodman, 1991).

Lipsey and Wilson (2001) noted four main advantages to the use of meta-analysis. The first advantage is that meta-analysis adheres to a strict process in summarising research findings, where each study is analysed following a specific criterion using coded

variables. Secondly, meta-analysis relies on quantitative summaries rather than qualitative summaries of statistical difference. The effect size and the standard error are the two main variables that characterize meta-analysis. Effect size is essentially the strength across the studies and the standard error is a function of sample size, where small size samples do not have enough statistical power. Third, meta-analysis is able to provide relationships that are obscure in conventional reviews due to the systematic coding. Lastly, meta-analysis provides an organized way of handling information from a large number of studies.

3.3: Outcome Measurement

The unit of analysis for included studies was the number of citizen complaints received by an officer. Studies included in this review had to have addressed this outcome measure. Outcome results were presented in quantitative form that permitted computation and reasonable estimation of an effect size statistic representing the difference in police officers with varying levels of higher education. The purpose of this thesis is to examine the differences between groupings of officers by education level therefore the effect size that appears to be most appropriate for the meta-analysis was the standardized mean difference. The standardized mean difference is the difference between the mean scores expressed in standard deviation units. This method is used with research findings that contrast two groups on their respective mean scores on a variable. The variable in this review, citizen complaints, was similarly operationalized across the included studies.

3.4: Inclusion and Exclusion Criteria for Studies

There was no restriction as to the type or nature of the citizen complaint. All forms of complaints were included whether it was for excessive use of force, unprofessionalism, unethical behaviour, or any other type of complaint. Studies must have specified the educational level of the police officers examined. The educational level data of included studies consisted of conditions as broad as those with any level of completed college education to as specific as the number of completed units, degrees, and/or when the units were completed. The studies included in this review must have minimally provided comparison information between two conditions: education and no college experience. For the purposes of this review, police academy training was not considered college experience although most academies in the United States have affiliation with a college and award college credit for completion of police academy courses. Since police academy training is an occupational requirement of all police officers, this experience is a shared condition for both groups and will not be considered part of the condition of a college education.

This review included both published and unpublished studies. There was no limit to how long ago the study was completed or when the work published. Studies could have come from reports, book chapters, conference abstracts, thesis or they may be informally reported and/or unpublished. Studies could have been conducted in any country. Due to limited time, resources, and facilities, studies published in a language other than English were excluded from this review.

Studies examining this research topic typically used correlational analysis where the condition of college education was examined against the number of citizen

complaints. The treatment condition of a college education is not suitable for randomization, since it would be far reaching to imagine a study where individuals were randomly assigned to groups that would experience different levels of college educations. Therefore, in order to address a minimal amount of methodological rigor, this review only included those studies that utilize a multi-variate regression analysis and not simply a bi-variate analysis. There are many variables that could affect the internal validity of this research question and therefore only those studies that look at various conditions simultaneously were included.

3.5: Search Strategies

Several search strategies were used to complete a thorough search for studies meeting the inclusion and exclusion criteria discussed above. Searching began with a key word search of several online abstract databases and search engines. The key word search included (Police or Law Enforcement) AND (Police Performance) AND (study). These search terms were left broad because the data sought, citizen complaints and higher education, are often not the focus of a particular study but instead additional co-variates within a range of recorded information.

The databases and search engines included Criminal Justice Periodical Index, Criminal Justice Abstracts, National Criminal Justice Reference Services Abstract, Sociological Abstracts, Social Science Citation Index, Dissertation Abstracts, Government Publications Office, Police Executive Research Forum, Centrex, ERIC, as well as Web of Knowledge, SCOPUS, Ministry of Justice Statistical Publications, Home Office Statistical Bulletins, Intute: Social Sciences, and Google Scholar.

Secondly, I reviewed the bibliographies of works completed on the topic of police officer performance and the relationship to higher education. I also performed forward searches, where databases allowed, of foundational works relating to issues surrounding police officers and higher education.

Thirdly, I performed hand searches of leading journals surrounding this topic. These journals included the Journal of Criminal Justice Education, Journal of Police Science and Administration, Policing: An International Journal of Police Strategies & Management, and Police Quarterly.

Lastly, I made contact, via email, with Professor Lawrence Sherman who has published several works in the past relating to police officer performance and higher education. Professor Sherman was provided with the final list of included studies to review. This was done to identify studies that could have been missed during the preliminary search strategies and also to potentially identify unpublished works that Professor Sherman might have knowledge of.

3.6: Assessment of Methodological Quality of Studies

Included studies used multi-variate regression analysis where education level was but one of many variables that were observed in relation to police performance and citizen complaints specifically. These data could have been drawn from very small populations, like small town police departments with relatively small numbers of officers to larger populations made up of several different large law enforcement organisations. Because higher education is not conducive to random assignment, studies were causal comparative. It was possible for studies to be quasi-experimental when the focus of the

study was on a factor that could have been manipulated and/or randomly assigned and education level was simply an included variable that was recorded.

It was also likely that included studies had primary outcomes measures other than citizen complaints. Since citizen complaints were only one aspect of police performance measurement, studies looking at police performance probably measured several different performance areas simultaneously.

3.7: Criteria for the Determination of Independent Findings

Although not anticipated, there was a potential that studies could have had overlapping data. This review did not include any meta-analysis or secondary analysis of findings that could have risked influencing or biasing effect size. The purpose of this review was to identify those studies that contain comparable data with regard to education level and number of citizen complaints.

3.8: Data Management and Data Extraction Strategy/Coding

All eligible studies were coded on a variety of criteria using the same coding form (Appendix A). The coding included details such as: a reference number, title of article, authors, publication type (book, journal article, chapter, dissertation, thesis, unpublished report, conference paper, or other), the nature and description of comparison groups (different levels of higher education such as some college, associate's degree, bachelor's degree, master's degree etc), unit of analysis, variables tested, sample size, length of study, methodological type (Maryland scale), statistical test or tests used, reports of statistical significance if available, effect size and/or power if available, and conclusions

drawn by the author or authors. I conducted all coding for this review since it was to be completed as a requirement for a Master's degree program at the University of Cambridge.

3.9: Data Synthesis

This review resulted in meta-analysis of the results of the studies meeting inclusion and exclusion criteria. The primary data sources, the included studies, reported correlations between level of higher education and citizen complaints. The included studies presented correlational data, which were based on educational conditions ranging from a minimum of two subgroups, to differentiating between those with a college degree and those without, to seven subgroups differentiating between various levels of college education, and degrees. These correlations were then converted into standardized mean differences in order to compute average effect sizes. As a guide for the interpretation of effect sizes, Cohen (1988) considered effect sizes of .2 standard deviations to be small, effect sizes of .5 standard deviations to be medium and effect sizes of .8 standard deviations or higher to be large. This was completed using the software program called Comprehensive Meta-analysis version 2.0. This program was used to calculate Hedge's g which is an effect size measurement similar to Cohen's d (1988), but is considered more sensitive to unequal or small sample sizes. The included studies varied with regard to sample sizes, ranging from 23 (Gardner et al. 1998) to 1608 (Cohen and Chaiken 1977) with half of the studies reporting a sample size of less than 200.

The meta-analysis was initially conducted on all studies meeting the inclusion criteria. Subsequent meta-analysis were conducted where studies were separated by

organisational size and then by publication status, either published or unpublished. In the second meta-analysis, the studies were separated by organisational size. Included studies were placed into either a large organisation category or small to medium organisation category. For the purposes of this review, a large organisation was considered to be one that employs a minimum of 1,000 sworn officers, examples of which included the New York Police Department, the Los Angeles Police Department, New York Transit Police, Dade County Sheriff's Department, and the Michigan State Troopers.

A narrative review of the studies included in this meta-analysis might have unnecessarily furthered the debate on the relationship between higher education and citizen complaints by ignoring non-statistically significant findings and reporting negative or zero findings which may be strictly the result of measurement and sampling errors. Therefore, in order to avoid simple vote counting, meta-analysis allowed for a more accurate examination of the relationship between higher education and citizen complaints.

Chapter 4: Results

4.1 Description of Eligible Studies

Fourteen studies were identified that met all inclusion and exclusion criteria. These studies yielded a total of 5359 participant officers, which were included in this meta-analysis. Table 1 presents a summary of the studies' characteristics included in this meta-analysis. Most of the studies were conducted in the 1980's and 1990's, with three conducted during the 1970's and one done in the 2000's. All fourteen studies were conducted in the United States. Eight of the studies were unpublished works, five were journal articles and one was published as a chapter in a book. Eight of the studies had a sample size of less than 200 officers, three had a sample size of more than 200 but less than 500 officers and three had sample sizes of more than 500 officers. Seven of the studies examined of large organisations, for example Los Angeles Police Department and New York Police Department, the remaining seven studies were coded as either medium or small agencies.

The study conducted by Murrell (1982) was broken down into two studies. The decision to do this was made because the study made a distinction and recorded data between two types of organisations, an urban police force and a rural police. The two types of organisations produced dissimilar results and had a major difference in sample size. Therefore studies were treated as individual studies although they were completed by the same researcher at the same time.

Table 1: Characteristics of the Studies Included in the Meta-analysis

Author(s), Year Published?	SAMPLE	REGION	COVARIATES	FINDINGS (Correlations, Effect Size)
Buttolph, S.E. (1999) Unpublished	-Harmonic N=116 officers -2 subgroups -36 officers with BA remainder without -mean age 36.4 with range of 21-65 -mean experience 10.7 years with range of 1-32 -106 subjects were male -96.4% were Caucasian	Southeast Police Department serving a population of 40,000.	Department complaints, total complaints, citizen commendations, department commendations	-0.01, -0.020
Cascio, W.F. (1977) Published	-Harmonic N=940 officers -3 subgroups -451 with no degree, 339 with some college, 150 with Bachelors Degree -825 were White, 60 African-American, 55 Hispanic,	Dade County Florida	Use of force, injuries, accidents, disciplinary actions, sick days, commendations	-.11, -0.221
Cohen, B. and Chaiken, J.M. (1973) Published	-Harmonic N 1608 Officers -3 Subgroups -1537 officers without Bachelors Degree, 21 officers with at least one year of college, 50 officers with Bachelors Degree -All officer were from a police academy in 1957 -all subjects were male -1482 officers were white, 100 officers were black, 25 officers were Hispanic	New York Police Department	career advancement, commendations, complaints (brought to civilian review, departmental, criminal misconduct, total complaints, complaints brought to trial, complaints sustained), time spent sick, # times sick, false claim of injury, # times gun taken away, # of arrests, police academy score, field training score, IQ, age, traffic summons, military discipline, arrest history, court appearances, and background rating	-.08, -0.160
Del Castillo, V.D. (1984) Unpublished	-Harmonic N 160 Officers -59 officers without college, 101 officers with college -mean age 24.46 with a range of 21-33 -all from cohort class of 1981	New York Transit Police	Police academy performance, class ranking, commendations, class evaluations, derogatory reports, sustained disciplinary charges, suspension days, probation evaluation, absenteeism, arrests	0.015, 0.040
Gardner, J.F., Scogin, F., Vipperman, R., and Varela, J.G. (1998) Published	-Harmonic N of 23 officers -Mean Age 30.8 -Mean number of years of education 13.7 -16 officers were male -16 officers were white, 7 were African-American -all officers were from a police academy class in 1989	Alabama, 12 different agencies ranging from 4 to 500 officers	supervisor ratings, sick leave, commendations, reprimands	-0.08, -0.155
Hooper, M.K. (1988) Unpublished	-Harmonic N 129 Officers -3 subgroups -48 officers without AA or BA, 29 officers with AA, 52 officers with BA -Mean age 28.88 with a range of 22-42 -110 were male -77 were white, 13 were African-	Los Angeles Police Department	Police academy performance, overall performance rating, commendations, sick time, report writing, probationary evaluations	-0.05, -0.100

	American, 6 were Asian American, and 32 were Hispanic American			
Kappler, V.E., Sapp, A.D., and Carter, D.L. (1992) Published	-Harmonic N 120 officers -2 subgroups -35 officers without degree, and 85 officers with BA -mean age 37.5 with a range of 22-66 -mean experience 10.3 years with a range of 1-30 -95 line level officers and 25 administrative -101 male officers and 19 female -106 officers were white	Midwest Police Department serving a population of approximately 60,000 with 98 sworn officers	Rule violations	-0.275, -0.568
Kedia, P.R. (1985) Unpublished	-Harmonic N 150 -6 subgroups -25 officers with only high school diploma, 30 officers with 1-60 hours college, 24 officers with 61-100 hours of college, 6 officers with 101-130 hours of college, 50 officers with BA, and 9 officers with MA -mean age 33.44 with range of 22-53 -85 officers were non-supervisory and 65 were supervisory -138 officers male and 12 female -130 officers were white, 18 were African-American, and 2 were other race	Louisiana, Medium sized city	Commendations, injuries, absenteeism, performance ratings, improper use of firearms, military experience.	0.07, 0.140
Murrell, D.B. (1982) A Unpublished	-Harmonic N 603 -4 Subgroups -175 officers have only high school diploma, 150 officers had some college, 150 officers had an Associates degree, and 128 officers had a Bachelors degree -99% were male -	Southwest, Urban city	commendations, suspensions, reprimands, performance ratings, sick leave, promotional test scores, peer ratings, firearm discharges, felony arrests, misdemeanour arrests	-0.07, -0.140
Murrell, D.B. (1982) B Unpublished	-Harmonic N 137 -4 Subgroups -52 officers have only high school diploma, 17 officers had some college, 34 officers had an Associates degree, and 34 officers had a Bachelors degree -99% were male	Southeast, Rural city	commendations, suspensions, reprimands, performance ratings, sick leave, promotional test scores, peer ratings, firearm discharges, felony arrests, misdemeanour arrests	.04, 0.080
Palombo, B.J. (1995) Published	-Harmonic N 397 -5 subgroups -148 officers had high school diploma and not college, 219 officers had some college or a degree -353 officers were male and 44 female	Los Angeles Police Department	commendations and professional attitude	-0.23, -0.472
Peterson, D. (2001) Unpublished	-Harmonic N 370 officers -7 subgroups - 40 officer had high school diploma with no college, 100 officers had some college, 43 officers had an Associate's degree, 37 officers had 3-4 years of college, 112 officers had a Bachelor's degree, 31 officers had more than a Bachelor's degree and 7 officers had a graduate or law	Midwest midsized police department	use of force, arrests, job satisfaction	-0.04, -0.080

	degree -mean age 34.8 with standard deviation of 8.37 -mean experience was 9.62 years with standard deviation of 7.74 years -326 officers were male and 44 female -321 officer were white, 28 were African American, 8 were Hispanic, 6 were Asian			
Poland, J.M. (1976) Unpublished	-Harmonic N 106 -3 Subgroups -52 Officers had only a high school diploma, 45 officers had some college, and 9 officers had a Bachelors degree -data was taken in 1975 from two cohorts, graduates of class of 1964 and 1969	Michigan State Troopers	awards, auto accidents, times assaulted, times weapon used, sick days, reprimands, police academy score	-0.11, -0.220
Wilson, H.T. (1994) Published	-Harmonic N 500 officers -4 subgroups -305 officers had only high school diploma, 65 officers had Associates degrees, 45 officers had Bachelors degrees, and 85 officers were unknown educational level -mean age was 35.25 with range of 26-46 -mean experience was 9.5 years with a range of 5-15 years -410 officers were male and 90 female -350 officers were white, 45 African American, 70 Hispanic, 25 Asian, and 10 other races	California, Large Department	allegations	-0.11, -0.221

Table 2: Descriptive Characteristics of Included Studies: Coding Variables

Coding Variable and Categories	Frequency	Percentage
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Bibliographic Information

Publication Year

Before 1980	3	21.4
1980's	5	35.7
1990's	5	35.7
Since 2000	1	7.1

Country

USA	14	100
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Publication type

Journal article	5	35.7
Book, Chapter	1	7.1
Unpublished	8	57.1

Sample Characteristics

Sample size

Less than 200	8	57.1
201-500	3	21.4
Greater than 500	3	21.4

Organisational size

Small to Medium	7	50
Large	7	50

4.2 Descriptions of Individual Studies

The Buttolph (1999) study included 116 officers from a small to medium sized law enforcement organisation. This study resulted in data that produced an effect size of -0.020 (standard error of 0.187) with a lower confidence interval of -0.386 and an upper confidence interval of -0.346, based on a 95% confidence interval. The effects size found for this study was found to be not statistically significant at $p < 0.915$. This study coded two levels of education: having a bachelor's degree or not.

The Cascio (1977) study included 940 officers from a large sized law enforcement organisation and resulted in data that produced an effect size of -0.221 (standard error of 0.066) with a lower confidence interval of -0.350 and an upper confidence interval of -0.092, based on a 95% confidence interval. The effects size found for this study was found to be statistically significant at $p < 0.001$. This study coded three levels of education: no degree, some college, and bachelor's degree.

The Cohen and Chaiken (1973) study, which included 1608 officers from a large sized law enforcement organisation, resulted in data that produced an effect size of -0.160 (standard error of 0.050) with a lower confidence interval of -0.259 and an upper confidence interval of -0.062, based on a 95% confidence interval. The effects size found

for this study was found to be statistically significant at $p < 0.001$. This study coded three levels of education: no college degree, at least one year of college, and bachelor's degree.

The Del Castillo (1984) study included 160 officers from a large sized law enforcement organisation and resulted in data that produced an effect size of 0.040 (standard error of 0.159) with a lower confidence interval of -0.272 and an upper confidence interval of 0.351, based on a 95% confidence interval. The effects size found for this study was found to be not statistically significant at $p < 0.802$. This study coded two levels of education: college and no college.

The Gardner et al. (1998) study included 23 officers from a small to medium sized law enforcement organisation. This study resulted in data that produced an effect size of -0.155 (standard error of 0.187) with a lower confidence interval of -0.002 and an upper confidence interval of 0.693, based on a 95% confidence interval. The effects size found for this study was found to be not statistically significant at $p < 0.721$. This study coded for levels of education in terms of years of education.

The Hooper (1988) study included 129 officers from a large sized law enforcement organisation and resulted in data that produced an effect size of -0.100 (standard error of 0.177) with a lower confidence interval of -0.447 and an upper confidence interval of 0.248, based on a 95% confidence interval. The effects size found for this study was found to be not statistically significant at $p < 0.575$. This study coded three levels of education: no degree, associate's degree, and bachelor's degree.

The Kappler et al. (1992) study included 120 officers from a small to medium sized law enforcement organisation and resulted in data that produced an effect size of -0.568 (standard error of 0.191) with a lower confidence interval of -0.943 and an upper

confidence interval of -0.194, based on a 95% confidence interval. The effects size found for this study was found to be statistically significant at $p < 0.003$. This study coded two levels of education: no degree and bachelor's degree.

The Kedia (1985) study, which included 150 officers from a small to medium sized law enforcement organisation, resulted in data that produced an effect size of 0.140 (standard error of 0.165) with a lower confidence interval of -0.183 and an upper confidence interval of 0.462, based on a 95% confidence interval. The effects size found for this study was found to be not statistically significant at $p < 0.396$. This study coded six levels of education: high school diploma, 1-60 college units, 61-100 college units, 101-130 college units, bachelor's degree, and master's degree.

The Murrell (1982 A) study included 603 officers from a small to medium sized law enforcement organisation and resulted in data that produced an effect size of -0.140 (standard error of 0.082) with a lower confidence interval of -0.300 and an upper confidence interval of 0.020, based on a 95% confidence interval. The effects size found for this study was found to be not statistically significant at $p < 0.086$. This study as well as Murrell (1982 B) coded four levels of education: high school diploma, some college, associate's degree, and bachelor's degree.

The Murrell (1982 B) study included 137 officers from a small to medium sized law enforcement organisation, which resulted in data that produced an effect size of 0.080 (standard error of 0.172) with a lower confidence interval of -0.257 and an upper confidence interval of 0.417, based on a 95% confidence interval. The effects size found for this study was found to be not statistically significant at $p < 0.643$.

The Palombo (1995) study included 397 officers from a large sized law enforcement organisation and resulted in data that produced an effect size of -0.472 (standard error of 0.103) with a lower confidence interval of -0.674 and an upper confidence interval of -0.269, based on a 95% confidence interval. The effects size found for this study was found to be statistically significant at $p < 0.001$. This study coded five levels of education: high school diploma, some college, associate's degree, bachelor's degree, and master's degree.

The Peterson (2001) study, which included 370 officers from a small to medium sized law enforcement organisation, resulted in data that produced an effect size of -0.080 (standard error of 0.104) with a lower confidence interval of -0.284 and an upper confidence interval of 0.124, based on a 95% confidence interval. The effects size found for this study was found to be not statistically significant at $p < 0.444$. This study coded seven levels of education: high school diploma, some college, associate's degree, 3-4 years of college, bachelor's degree, more than a bachelor's degree, and graduate or law degree.

The Poland (1976) study included 106 officers from a large sized law enforcement organisation and resulted in data that produced an effect size of -0.220 (standard error of 0.143) with a lower confidence interval of -0.501 and an upper confidence interval of 0.060, based on a 95% confidence interval. The effects size found for this study was found to be not statistically significant at $p < 0.124$. This study coded three levels of education: high school diploma, some college, and bachelor's degree.

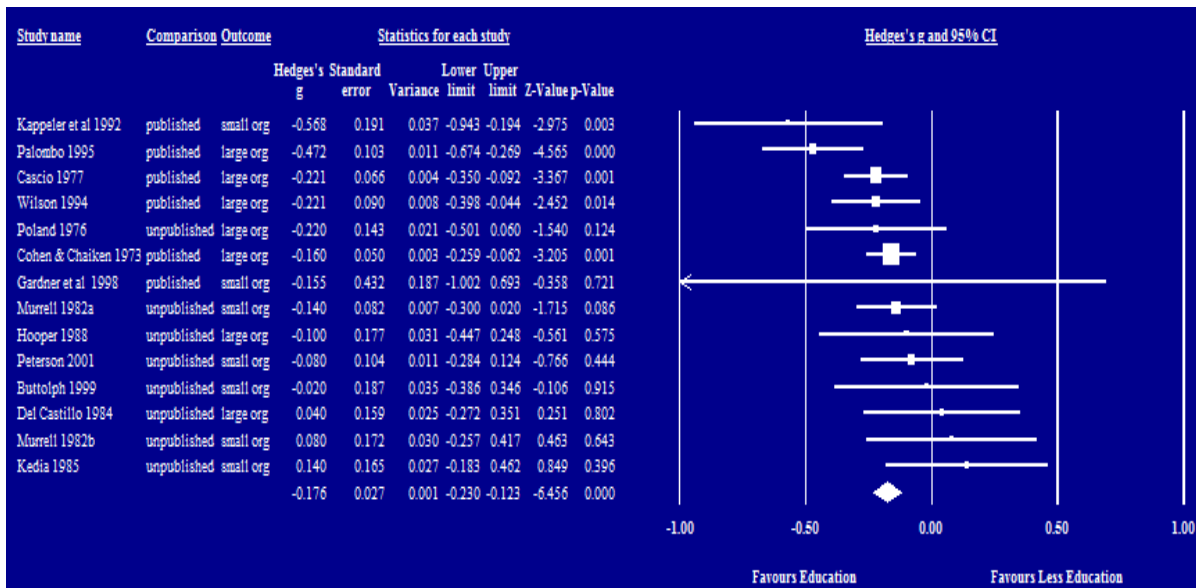
The Wilson (1999) study included 500 officers from a large sized law enforcement organisation, resulting in data that produced an effect size of -0.221

(standard error of 0.090) with a lower confidence interval of -0.398 and an upper confidence interval of -0.044, based on a 95% confidence interval. The effects size found for this study is statistically significant at $p < 0.014$. This study coded levels of education as: high school diploma, associate's degree, bachelor's degree.

4.3 Meta-Analysis

The first round of analysis (illustrated in Figure 1) was a meta-analysis of all fourteen included studies. This meta-analysis resulted in an average effect size of -0.176 (standard error of 0.027) showing a small relationship between education and citizen complaints. The 95% confidence interval had a lower limit of -0.230 and an upper limit of -0.123. This average effect size was found to be statistically significant $p < 0.001$ level.

Figure 1. Meta-analysis of all Studies



The second round of analysis was made based upon the distinction between organisations that were classified as large organisation (illustrated in Figure 2) as opposed to those that were classified as small to medium sized (illustrated in Figure 3).

Figure 2 included those studies that were classified as large organisations. The meta-analysis of studies involving large organisations resulted in an average effect size of -0.206 (standard error of 0.032). The 95% confidence interval had a lower limit of -0.269 and an upper limit of -0.143. This average effect size was also found to be statistically significant $p < 0.001$ level. Figure 3 included those studies classified as small to medium sized organisations. The meta-analysis of studies involving small to medium organisations resulted in an average effect size of -0.100 (standard error of 0.052). The 95% confidence interval had a lower limit of -0.202 and an upper limit of 0.001. This average effect size was found to be not statistically significant $p < 0.053$ level.

Figure 2. Meta-analysis: Large Sized Organisations

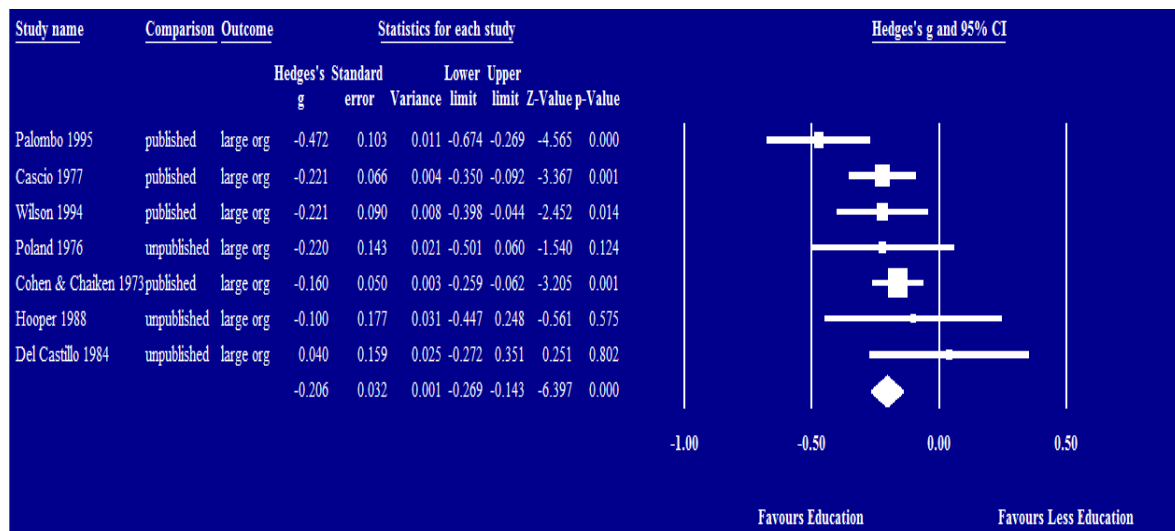
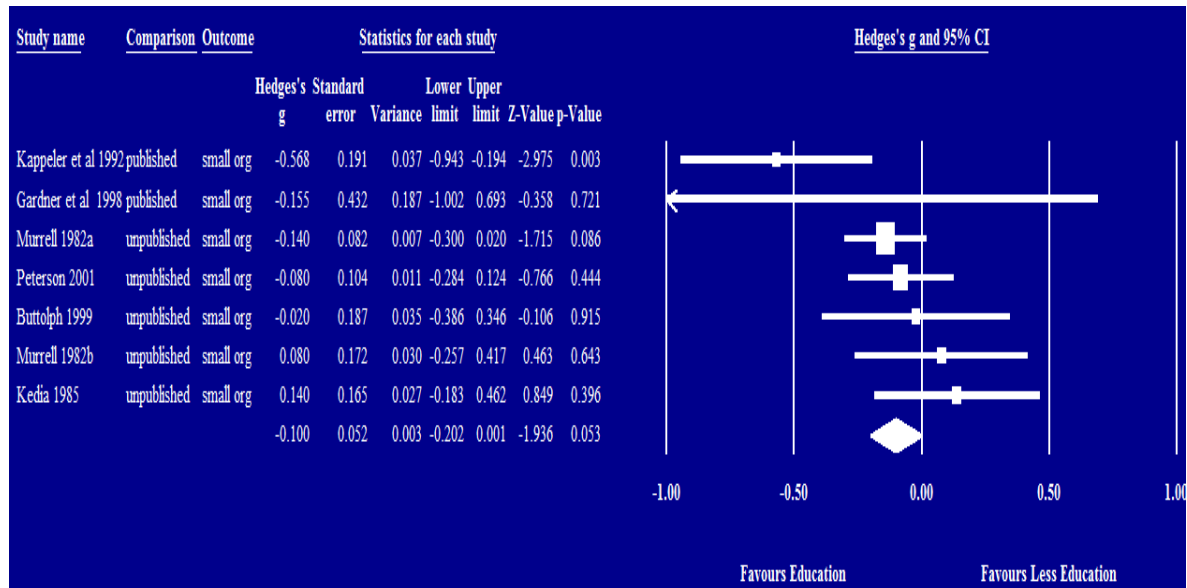


Figure 3. Meta-analysis: Small to Medium Sized Organisations



The final round of analysis was made based upon the distinction between published studies (illustrated in Figure 4) and unpublished studies (illustrated in Figure 5). The meta-analysis of published studies resulted in an average effect size of -0.231 (standard error of 0.034). The 95% confidence interval had a lower limit of -0.297 and an upper limit of -0.165. This average effect size was found to be statistically significant $p < 0.000$ level. The meta-analysis of unpublished studies resulted in an average effect size of -0.072 (standard error of 0.047). The 95% confidence interval had a lower limit of -0.164 and an upper limit of 0.019. This average effect size was found to be statistically significant $p < 0.120$ level.

Figure 4. Meta-analysis of Published Studies

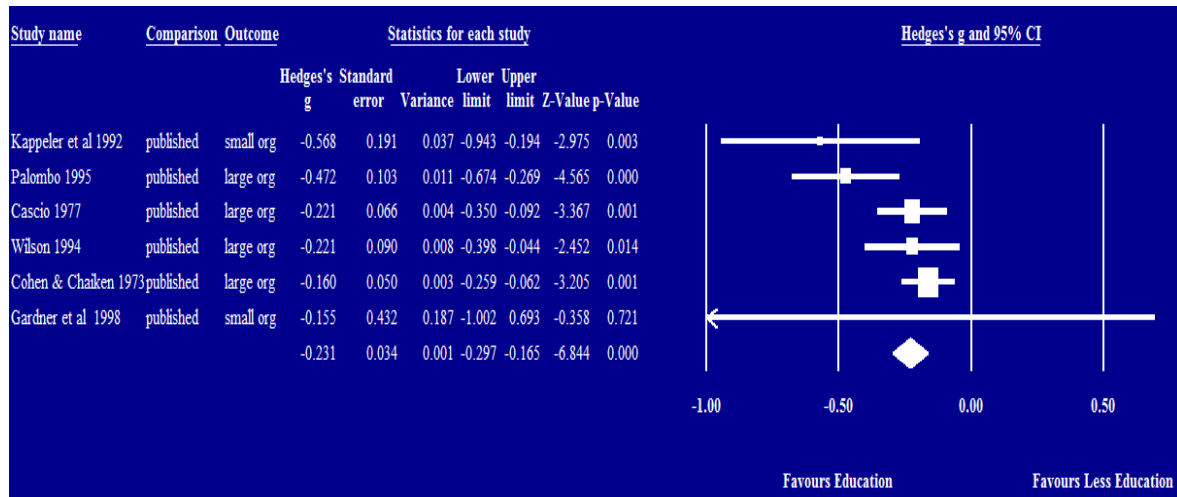
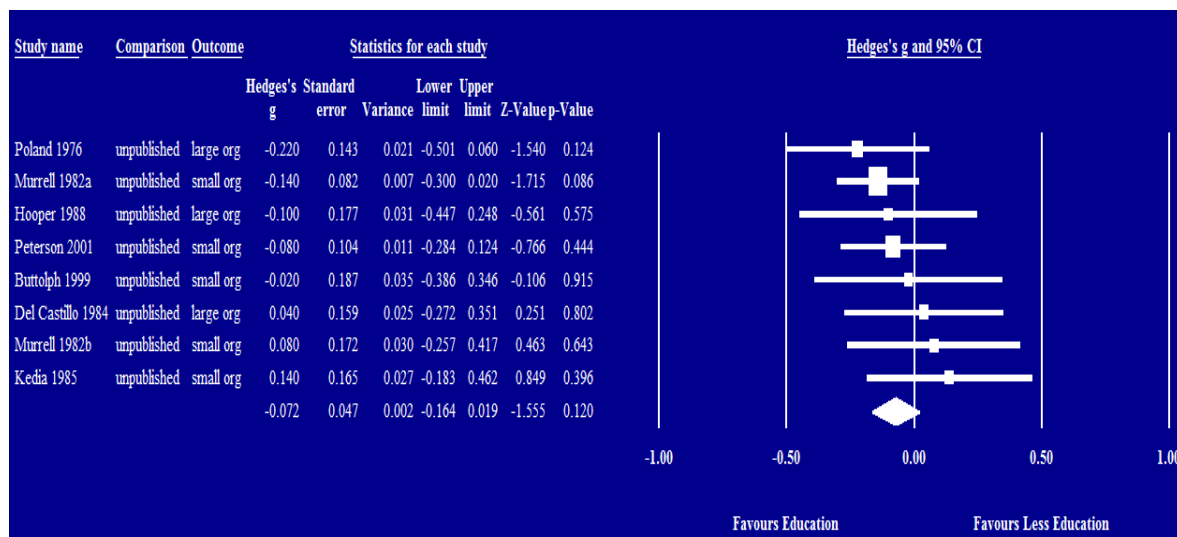


Figure 5. Meta-analysis of Unpublished Studies



CHAPTER 5: DISCUSSION

5.1: General Discussion

This systematic review sought to assess available empirical evidence on the impact of a college education of an officer with regard to the outcome of citizen complaints. The method used was a systematic review culminating with a meta-analysis of the data generated by relevant studies. The cumulative results of this meta-analysis supported the hypothesis that education and citizen complaints are negatively correlated, meaning that increased education was associated with fewer citizen complaints received by an officer. The overall effect size was relatively small by Cohen's (1988) previously discussed standards but they were statistically significant. Ultimately, this meta-analysis has provided a general understanding of the cumulative results of research gathered through the documented search strategies regarding relationship between education and citizen complaints. Therefore, the results of this systematic review and meta-analysis support the fact that we can expect small reductions in the number of citizen complaints based upon an increase in police officer education.

Although these studies offer correlational support about higher education and citizen complaints, actual causation cannot be determined. Authors of some of the published studies did offer theories of how education might influence citizen complaints. Cohen and Chaiken (1973) in speaking about police officer performance in general, noted that when observing police performance and education there is likely a combination of motivation, stamina, and intelligence in officers that attended college. Cascio (1977) echoed the idea that motivation and education were closely related and both had positive effects on police performance. Kappler et al. (1992) suggested that officers with a

college education might understand rules and regulations better and also possess more self-discipline to follow those rules than officers with less education. Wilson (1999) argued that in addition to several qualities that are associated with a college education that also relate to better police officer performance like discipline, intelligence, communication and interpersonal skills, officers with a higher education might be influenced by the thought of upward mobility. Wilson (1999) went on to say that officers with degrees might focus more on promotional goals, therefore accounting for a work profile that decreases the likelihood of citizen complaints.

Subsequent meta-analyses were conducted that differentiated between the sizes of the organisations studied and whether or not the study was published. The results of these meta-analyses warrant further discussion. When meta-analysis was conducted separately for those studies using a sample from an operationally defined large organisation, the overall effect size was greater than the overall effect size of all included studies. Conversely, when meta-analysis was conducted separately for studies that were coded as having samples from small to medium sized organisations, the effect size was smaller than the overall effect size of all included results as well as being non-significant. Since there were only 14 studies included in this systematic review, it would be inappropriate to conclusively state that the studies conducted using a sample from a large organisation were systematically different. This appears to be the case but with so few studies, such differences are simply educated guesses. It very well could be the case that these studies of larger organisations are revealing an actual difference in police performance by their college educated officers. It may also be the case that with the

small amount of studies included in this review, that published studies happened to generally be conducted using larger organisations as a sample.

The final differentiation of studies was made by separating the meta-analysis of published studies versus unpublished studies. Meta-analysis of the published studies resulted in the largest effect size of all five meta-analyses that were conducted. The meta-analysis of the unpublished studies resulted in a non significant effect size smaller than all other meta-analyses. Again, with fewer studies included in this systematic review, a conclusion of publication bias seems to be evident but not conclusive. Publication bias is the bias resulting from the tendency for studies that result in higher effect sizes and statistical findings to make their way into published journals (Dickersin 2005). Evidence of publication bias was discovered by Mallet et al. (2002) when they reviewed the first 1000 Cochrane systematic reviews and discovered that nearly 50% of the reviews did not include data from unpublished or grey works. Based on the comparison of the meta-analysis of included studies of this review between published and unpublished studies, there is some evidence of publication bias. Undoubtedly though, there are probably studies that escaped the search criteria set forth in this systematic review. The result of the meta-analyses of these two groups suggests that there could be either systematic heterogeneity between studies with different sample sizes or that there is a publication bias present. These findings highlight the fact that policy makers and academics should be cautious about overemphasizing the negative relationship between education and citizen complaints. Future works in this area would likely benefit from the production of a funnel plot. Funnel plots are often useful as a supplementary analysis to

meta-analysis and are primarily a visual aid to detect bias by examining the treatment effect against a measure of study size (Egger et al. 1997).

5.2: Limitations

There are a number of limitations that surround the research of police behaviour. Many of the same limitations of this study were previously brought to light by Sherman in 1980 in his examination of causes for police behaviour. Sherman (1980) noted that many of the previous studies suffered from a number of flaws, mostly pertaining to the failure to control for other factors outside of education that may influence police performance. Sherman (1980) argued that a true cause for both educational achievement and police performance might actually be intelligence and motivation. Sherman (1980) also noted a lack of studies examining the kind of education officers receive which he argued created an erroneous assumption that one year of college was a standard level of measurement without variance in the level of education. Although there was a fair bit of confidence that education was at least a correlate of police behaviour, there was less confidence in determining whether education was a cause of police performance and if it were a cause, to what extent it was so. Hudzik (1978) also suggests that research into this area should more carefully control for the effects of a variety of extraneous and component variables before coming to conclusions about the effects of higher education on the police. The existing literature provides little insight into the full spectrum of other variables which may affect the relationship of higher education and citizen complaints. Therefore, we know little about the actual causal interactions and how education may affect citizen complaints, and under what condition.

There are also several specific limitations to this systematic review. First, there were a relatively small number of studies that were included in the review. This was probably due in large part to the accessibility of data from previous studies. Because this study looked at higher education and citizen complaints, there was a tendency for this data to be embedded in studies as opposed to being a primary finding. Many studies on police performance would list education as one of many background characteristics and citizen complaints as one of many performance outcome measurements. Therefore the lack of studies presenting this data in a readily available format posed an increased potential that studies might be overlooked. Given a greater amount of time and resources, a more thorough search for studies with the necessary embedded data could have been conducted, potentially resulting in additional included studies.

Secondly, this research is not necessarily generalizable to counties with police hiring and training standards different than those of the United States. All 14 studies that were identified were conducted in the United States. The results could be due in part to differences in police selection in different countries, particularly with regard to age of new recruits. For instance, Germany allows police recruits to begin the 3-year process of becoming a police officer at the age of 16 years of age. Similarly, Australia had a system much like Germany's where officers decided very young to become police officers and typically only those officers that were able to attend college as supported by their police department would receive a higher education. Additionally, some countries like Hong Kong and India have law enforcement rank structures similar to the military that allows college educated police officers to begin their career at a higher rank. In these situations, officers with college degrees would logically have a different level of exposure to the

public than the line level officers. These systems are in contrast to the United States where the minimum age for recruits is normally 20 ½ years of age. It is also the case in the United States that most students will not finish high school until age 17 or 18 years of age. This coupled with a higher minimum age requirement for most police departments means that those police hopefuls wishing to enter the profession would have several years between their compulsory schooling in high school and the time when they can apply to be a police officer. This is also supported by a system of higher education that prides itself on a high level of accessibility to the public, which means that people who eventually apply to become police officers will have an opportunity to attend college. This accessibility to education is supported by a large system of community colleges that are smaller schools within communities that offer lower level courses at a minimal price. Students at a community college can earn associate degrees and various certifications. It is this system of education, coupled with slightly different police officer training requirements, that has made the United States a suitable society in which to examine differences between police officers that have college degrees versus those that do not.

A third limitation has to do with the differences in the included studies. The studies varied with regard to how education was coded. Although the included studies provided correlational information between education and citizen complaints, the studies had varying levels for coding. Some studies recorded only whether an officer had a degree or not. Other studies measured education by the number of units, while other studies made additional distinctions. Although this situation is unfavourable, it is the reality of the state of the existing research. Two additional factors that were not typically included in studies that could affect the influence of a college education are; when the

degree was attained, either before or after becoming a police officer, and the type of college or university, differentiating between traditional residential or part-time distance learning. One of the suggestions made by Sherman (1978) and the National Advisory Commission on the Higher Education of Police Officers is that law enforcement organisations should spend more effort recruiting the educated as opposed to educating the recruited. Distinctions were not made in the studies between officers that had degrees prior to becoming a police officer and those that attained their degree during their career. Such a distinction could provide valuable insight and will be discussed further in the suggestions for future research. Similarly, no distinctions were made with regard to type of institution an officer received their degree from. This has become more of an issue in current times since the advent of the internet and online educational programs. Adult learners represent a significant market for institutions of higher education that can offer programs that fit into a working adult's schedule. Very little information is known regarding differences in performance between officers who have a degree from a traditional residential university versus a degree completed either entirely or in part by some alternative medium. This is also discussed in the suggestions for future research.

5.3: Suggestions for Future Research

An important outcome of this systematic review is the assessment of what is known about this topic and how future research could and should address current shortcomings. Firstly, the fact that the information sought after, education levels and relative citizen complaints, is not available on a large scale is frustrating because one would think that this information is kept by law enforcement organisations in various

forms. Certainly, most law enforcement organisations would have record of the educational level of their officers at the onset of their career as well as updates throughout the remainder of their employment. Police background checks during police pre-employment are some of the most thorough screening processes around.

Citizen complaints are also typically recorded and archived by organisations. These types of complaints will often times begin a type of paper trail and some form of records keeping would be necessary to keep order. So essentially, the information sought after with this systematic review, theoretically exists. The problem is that the information is not necessarily kept in an accessible format which would lend itself to analysis, or at least analysis outside of an organisation. It is possible that some law enforcement organisations maintain these data in a format suitable for analysis but the information is either kept for internal analytic purposes only or it simply has not been analyzed.

Given the limitations of current studies surrounding officer education and citizen complaints, it is important to discuss what future research should do to further our collective knowledge about this relationship. Future research does not need to rely on current information to be useful in this area of research. As discussed above, there exists a tremendous amount of archival data on police characteristics and police performance outcomes. Archival data could be culminated and categorized into as many variables as possible. Some of the background variables related to this research topic are: age, sex, ethnicity, educational level, whether higher education was obtained before, after or during police career, focus of degree, type of college (traditional residential, online, commuter, etc), prior military service, prior work experience, criminal record, personality index's, and intelligence. Some of the outcome variables that could be included in a

multi-variate regression analysis including citizen complaints are: background investigator ratings, police academy performance, arrests, proactive stops, uses of force, sick days, internal discipline action, supervisor ratings, probationary ratings, number of calls responded to, demographic of work assignment, different types of training, shifts worked (dayshift vs. nightshift), single officer vs. two-man units, and organisational size.

In addition to archival research, new research could add tremendously to the collective understanding of the effects of not only education but other background characteristics on police performance. The key to future research is to record as many co-variates and outcome measurements as possible to allow for determination of relationships among several variables. Another key to future research is control of extraneous variables such as assignment and rank. An ideal study examining the background characteristics of officers and police performance, with a focus on education and citizen complaints would likely use a sample of patrol officers who are off probationary status. To increase the level of control, officers could be matched on variables such as age, military experience, police academy performance, supervisor ratings, arrest rates, intelligence and levels of motivation. The purpose is to control for as many extraneous variables as possible while focusing on the differences in education level. Given large enough sample size, differences in educational level and type could be examined. Differentiation could be made between associate's degree holders, bachelor's degree holders, master's degree holders, and higher degrees as well. Further distinctions could be made between types of schools attended, examining whether they were traditional residential schools, community colleges, online schools, or some form of hybrid school. From there, distinctions could be made by course of studies or major.

Additional controls would apply to the timing of the study. It is my belief as a practitioner that the best initial time for a study looking at education and citizen complaints would be during an officer's patrol assignment following their probationary period. Typically an officer who has completed a police academy will be assigned to a Field Training Program that usually requires new officers to work with a supervising Field Training Officer. This period of time would arguably be marked by an officer being on his or her best behaviour. The officer's priority at this time in their career is simply to successfully complete their training program and make it off probation. Until an officer is off of probation, he or she is at risk of losing their job, which can typically be done without cause. Therefore, officers on probation tend to be on their best behaviour. It is the period of time after an officer is off probation where they are usually less supervised and given their full range of discretion to deal with the public as they will. Depending on the organisation, officers can spend a few years in a patrol capacity and then move on to another assignment or they can spend their whole career as a patrol officer. Therefore an ideal study would probably look at the first year to two years of post-probationary patrol assignments. In a perfect scenario, there would be a follow-up study conducted looking at the same sample group years later where there could be an additional distinction made between officers that attained a college degree (at various levels) during their employment as a police officer and those that had their degree prior to employment. There could also be a condition of officers that had a degree prior to employment and continued to further their education during employment. Such a study could shed light on several issues that have not received much attention in previous works.

5.4: Evidence-Based Policy Implications

Recent events illustrate the need for evidence based policy decisions regarding police selection preferences. Recently, the Chicago Police Department announced that it will make changes to its hiring standards (Main 2010). The Chicago Police Department is the second largest police department in the United States with a total number of sworn officers near 13,550. The department has been on a two year hiring slowdown which has left the department 2,300 officers short of their authorized strength. The Chicago Police Department has decided to raise its minimum age requirement for police recruits to 25 years of age from the previous 21 years of age, in addition to a previous 60 semester hour college credit requirement. Another change is that the department has also given preference to military service, which not only allows military veterans to apply at 21 years old but also waives the department's college credit requirement. The article does not mention any empirical reasoning for such a change, which does not necessarily mean that it was totally an ad-hoc decision, but one would imagine that if there were some evidence base to the policy changes that information would have been made public. This change would certainly send a strong message about what type of background an officer should have to work for that organisation. One would also have to question how much those veteran officers would be motivated to continue or begin their college education if they were already rewarded through their selection for having something other than a college degree.

This study is by no means definitive with regard to the benefit of higher education for police officers in general terms. The study does add to policy maker's ability to act with a higher degree of certainty and clarity about what is currently known about this

specific performance measurement and education. The results of this study show a small effect size in favour of education but the overall effect is probably influenced by publication bias. The value to policy makers is to provide the knowledge that little is known about the topic and a tremendous amount of value can likely be realized from analyzation of existing internal departmental data. Larger law enforcement organisations are in a good position to answer the question of whether higher education of their officers affects the frequency of citizen complaints. Therefore, for policy makers, the priority should be to increase the collective knowledge about police performance with their own department's information. Simultaneously, policy makers should work to utilize research evidence, such as the results of this study, when making decisions about desirable police officer backgrounds.

Law enforcement leaders are tasked with providing the best possible service for their respective communities. In order to do this, they must hone the potential of their agencies' human capital. Dobby et al. (2004) stated that 'Police leadership is ultimately about ensuring that individuals, the community and the state get the best that is reasonably possible from the human and other resources which are available to pursue the goals of policing'(p.26). This study adds to law enforcement leaders' ability to make evidence-based decisions regarding the value of education in their workforce.

5.5: Conclusion

Police performance is a very general concept. There are numerous definitions and arguments for how police personnel should be evaluated in terms of their performance. Frequency of citizen complaints is but one of the means of evaluating the police,

although this one might hold more importance than others. The reason for the increased importance associated with citizen complaints is that complaints acts as a gauge for measuring a community's satisfaction with the type of service they receive from their police department. In this way, citizen complaints fill the role of a quality control mechanism for the police, where the customer is the citizens who pay for their law enforcement services through tax dollars. The more that is known about complaints, such as the frequency and type of complaint, the easier it is for law enforcement organisations to identify if a potential problem exists.

Besides the community concerns, law enforcement agencies are also important stakeholders in the concern about citizen complaints. There is a substantial amount of financial and human resources that are involved in the complaint process. The amount of time and money devoted to investigating, adjudicating, and settling cases stemming from citizen complaints is tremendous. Citizen complaints have been and will likely continue to be a part of most police systems. There will always be citizens that will complain illegitimately about officers' actions and conversely some officers will act without legitimate basis from time to time. A police system devoid of citizen complaints is neither possible nor desirable (Wilson 1999).

Since citizen complaints are both necessary and permanent fixtures to the law enforcement environment, the factors that mitigate such a measurement become paramount. It is difficult to assess what specific aspects of higher education would have an impact on citizen complaints. There are several traits that are accepted as general requisites for a successful college experience that are also foundational to successful police performance. Some of these qualities are self discipline, patience, intelligence,

communication, determination, interpersonal skills, acceptance of criticism, collaboration, and tolerance for different points of view and cultures. The degree to which these traits existed prior to a college experience remains to be determined. It may also be the case that a propensity for these traits existed and were nurtured during one's college experience. Although there are a number of issues with prior research into the relationship between education and citizen complaints, there remains a need to pursue the answer to the question of whether a college degree is desirable for a police officer. This systematic review helped to identify the relationship between higher education and citizen complaints that exists within the confines of the included studies.

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