A DESCRIPTIVE STUDY ON
POLICE BODY CAMERAS AND CIVIL LIABILITY CASES

by

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As a result of several highly publicized deaths at the hands of local police officers over the last two years, the public has placed increased pressure on the police for greater transparency and accountability. The use of police body cameras has been one suggested remedy. However, there is a minimal amount of quantitative research about the impacts of police body cameras on the community, the police, and their interactions. This explorative study examines the potential fiscal impact of body-worn cameras by investigating the relationship between the cost of a police body-worn camera program and the annual total of financial civil liability pay outs resulting from police misconduct lawsuits in Oakland, California, from 2003 to 2015. The impact of the body-worn camera program on officer assaults was also examined. While it was hypothesized that the cost of a body-worn camera program would be warranted due to a decrease in annual civil liability settlements, the results indicated that there was no effect. There was, however, a significant decrease in total assaults on police officers. Therefore, while a financial cost-benefit argument cannot be made based on the presently available data, officer safety appears to be greatly enhanced by a body-worn camera program, which can consequentialy reduce the cost of healthcare, workman compensation, as well as costs related to missed work. However, due to the limited data and lack of control variables, the present study is only explorative and no definite cost-benefit conclusions to either direction should be drawn based on this study alone.
DEDICATION

To all those that supported, guided, and mentored me in the continuance of my education and the pursuit of my professional goals. From my family to my friends to my professors, this work is dedicated to you. Plus, for those that strive for the betterment of the world and the community, whether you are a police officer, civic administrator, activist, or a vigilant citizen neighbor.
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CHAPTER I
INTRODUCTION

One of the first examples of body-worn cameras in popular culture was perhaps presented in the 1986 film *Aliens*, when the Colonial Marines search the exomoon colony with cameras on their helmets. The idea of strapping a camera on one’s person to record a first-person view of events used to be an idea reserved for science fiction. Today, this practice is already in use to varying degrees across the country, from extreme athletes with GoPros to police officers on patrol.

In the last two years, increased attention from the media and the public on questionable use-of-force incidences by local police departments have added pressure on the police to adopt body-worn cameras to increase transparency and accountability. In August 2014, a shooting in Ferguson, Missouri received national attention and sparked protests. This was just one month after a police officer in New York City killed another African American, Eric Garner, with a chokehold application. Events escalated further in the following months with additional dubitable deaths at the hands of the police in Baltimore, Baton Rouge, Cincinnati, North Charleston and elsewhere. Each of these fatalities, particularly those caught on camera by witnesses, has brought up an issue of skewed perspective and “he-said, she-said” disparities (Letourneau, 2015; American Civil Liberties Union [ACLU], 2015; Dhillon, 2015). Over the past two years, as a result of these controversies, the use of body-worn cameras as an oversight tool for police has been hotly debated by the media, civil rights groups like the ACLU, and government officials.
Body-worn cameras (BWCs) “are small, pager-sized cameras that clip on to an officer’s uniform or are worn as a headset, and record audio and video of the officer’s interactions with the public.” (ACLU, 2015, p. 1). Many perceive that there are numerous benefits to BWCs, including increased transparency and police legitimacy, improved citizen behavior, better community relations and perceptions, faster resolution of citizen complaints or lawsuits, enriched availability of evidence, and expanded opportunities for police training [Ready & Young, 2015; Letourneau, 2015; Office of Community Oriented Policing Services (COPS), 2014]. Overall, it is widely believed that both, police officers and the public, will improve their behavior “based on the theory that human behavior changes under observation…when people are observed, they are ‘more prone to socially acceptable behavior and sense a heightened need to cooperate with the rules’” (Letourneau, 2015, p. 3). With BWCs providing a record of the behavior of police officers and the public, both parties should be keen to ensure that their behavior is not open to criticism, particularly if the officer or the citizen is arguing that their actions were vindicated.

However, there are a number of policy issues that must be addressed before police departments can begin using these devices. Policies will have to tackle matters ranging from the storage and retention of footage, to privacy concerns, to when to turn the cameras on and off, to whether or not the public is informed that their actions are being recorded (Dhillon, 2015; ACLU, 2015; COPS, 2014). For example, the Oakland Police Department has numerous policies that address when and what sort of interactions BWCs should record (i.e. citizen contacts, arrests, vehicle pursuits, a variety of searches etc.), what BWCs should not record (i.e. victims of sexual assault or confidential informants),
when to stop BWC recordings (i.e. when discussing sensitive information or at a perimeter post), and more (Oakland Police Department, 2016). Oakland’s policies are designed to provide greater transparency throughout police work while safeguarding privacy concerns, by limiting when to record events and prohibit camera activation when there is a reasonable expectation of privacy (such as personal conversations between partners in squad cars or within departmental facilities like bathrooms and locker rooms). Such privacy concerns are among the most common reservations of police departments and the public when it comes to BWCs. BWCs won’t just record the subject of a police-citizen encounter after all, but everyone in the background and within its periphery. The ACLU (2015) highlighted this issue when they wrote, “Police officers enter people’s homes and encounter bystanders, suspects, and victims in a wide variety of sometimes stressful and extreme situations…the challenge of on-officer cameras is the tension between their potential to invade privacy and their strong benefit in promoting police accountability” (p. 2). With the right policies and practices, however, BWCs can be used in a way that is both productive and protecting the public’s and the police’s privacy.

Most importantly though, there is one other critical consideration that will be at the heart of any discussion concerning BWC implementation—the cost.

While body-worn cameras can provide many potential benefits to law enforcement agencies, they come at a considerable financial cost. In addition to the initial purchasing cost, agencies must devote funding and staffing resources toward storing recorded data, managing videos, disclosing copies of videos to the public, providing training to officers, and administering the program (COPS, 2014, p. 43).

As is often the case in government, cost is frequently the most important consideration that can green light a program, or terminate it before it even gets a chance to be developed. Furthermore, BWC programs tend to expand in size, rather than contract.
The number of cameras deployed by a police department and the scope of their use tends to increase. Many departments begin with relatively few cameras for a trial period, and then continuously add more until their entire jurisdiction is covered. Police departments will have to look far into the future to perceive not just the initial costs of implementation, but additional costs for the expansion and maintenance of their BWC program (COPS, 2014).

Fortunately, there is good reason to believe that as the scale of a BWC program expands, the costs may balance out. To begin with, the basic laws of economic supply and demand state that as more and more police departments seek to utilize BWCs (increase in demand), a greater variety of manufacturers will offer such services (increase in supply) (Feenstra & Taylor, 2008). At present, there are two mainstream competitive companies that manufacture and offer storage and maintenance services to police departments: Taser International and Vievu LLC (Brown, 2015; Stroud, 2015; COPS, 2014). Increase in demand will create competition amongst BWC and data storage manufacturers, decreasing the cost of these devices (and serendipitously increasing storage options available to police departments).

In addition to the fundamental rules of economics, police departments can potentially save money through the consequential effects of a BWC program. As Chief Chitwood of the Daytona Beach Police Department explains, “If there is a lawsuit against the department, the settlements come from the department’s operational budget. By preventing these suits, the department has more money to spend on cars, technology, and other things that benefit officers” (as cited in COPS, 2014, p. 43). Furthermore, the cost and the number of such lawsuit settlements has been steadily on the rise.
According to Zusha Elinson and Dan Frosch (2015) of The Wall Street Journal, between 2010 and 2015 the top ten cities with the largest police departments collectively paid over $1 billion in police misconduct settlements and court judgments. The 48% increase in settlement payments from 2010, with a total of $168.3 million, to 2015, with a total of $248.7 million, reflects the increasing cost of such payouts. New York City alone paid $5.9 million to the estate of the aforementioned Eric Garner, who died due to a chokehold by the police (Elinson & Frosch, 2015). These claims against the police are increasing as well (Kappeler, Kappeler, & Del Carmen, 1993). For example, between 2003 and 2014 lawsuit claims filed against the New York City Police Department increased by approximately 70% (Elinson & Frosch, 2015). While there is data that will be presented to support the claim that BWCs reduce the number of citizen complaints or use-of-force incidences, there is no quantifiable evidence to support the notion of the potential fiscal benefits BWCs may have by reducing the amount spent on payouts from police misconduct lawsuits.

While there should be a decrease in police civil liability cases because police misconduct decreases or claims of police misconduct are proven unsubstantiated in court, similarly the behavior of the public should improve as well. This should result in fewer assaults on police officers. A decline in assaults on police officers should also lead to monetary savings due to drops in costs such as workman compensation benefits, employee medical insurance, and not to mention the loss of labor for missed work due to injury or the overtime paid to have another officer cover a shift.

1.1 Scope of the Study

Using preliminary data from the Oakland Police Department in California, the
primary purpose of the present study was to explore if any savings from police misconduct payouts appeared to warrant the cost of a BWC program. The impact of a BWC program on assaults against Oakland Police Department officers was also preliminarily examined. Specifically, the potential reduction in the trends relating to police misconduct payouts were examined through figures based on longitudinal alleged police misconduct data prior to and after the implementation of the Oakland Police Department’s BWC program. Potential reductions on both, payouts and assaults against Oakland police officers, were investigated by calculating two-tailed t-test scores for the differences on the mean numbers of payouts and assaults against officers prior to and after the implementation of the BWC program. With this in mind, it should be emphasized that the data available for the present study was limited to one police department, with no control variables presented. Thus, the interpretations of this study are only explorative, and should be simply used as a tool for direction that future research may take. No casual inferences should be drawn from these analyses.

As the review of the literature on this topic will show, the research on BWCs is still in its infancy, despite the amount of public discussion on this subject. Many of the scholarly reports are rooted only in theory and relatively few studies are based on quantitative research. As detailed above, the current paper will present a descriptive case study focusing on the Oakland Police Department’s BWC budget and history of financial awards due to civil rights violations. A discussion of the explorative results will be then offered with a comparison to local crime trends as a proxy for citizen behavior and police behavior. Following the discussion, a conclusion will assess the greater impact the results may have for police departments and BWC programs nationally, and where the
research can go from here to further our knowledge on this subject.
CHAPTER II
LITERATURE REVIEW

As mentioned, there is a surprisingly limited amount of computable research on body-worn cameras. In his original work for the Office of Community Oriented Policing Services (2014), Dr. White wrote, “…there have been few balanced discussions of the merits and drawbacks of police officer body-worn cameras and even fewer empirical studies of the technology in the field” (p. 13). In an interview in April 2015, Dr. White expanded even further, “the bottom line is that our entire knowledge base on the impact and consequences of this technology really boils down to…three or four [methodologically rigorous] research studies” (as quoted in Letourneau, 2015, p. 2-3). In order to understand the impact of BWCs, it is important to understand the theory that their proposed merits are built upon: deterrence and social control theory.

2.1 Deterrence and Social Control Theory

Deterrence theory states that “in contemplating a criminal act, [individuals] take into account the probable legal penalties and the likelihood that they will be caught” (Akers & Sellers, 2013, p. 15). If people know they are being observed and that there is a record of their actions, they will perceive a higher likelihood of getting caught due to proof of their illicit activities (leading to guaranteed subsequent legal penalties). Therefore, BWCs should not only keep police officers dutiful, but the public as well. Based on this theory, for example, citizens should think twice before giving false or cavalier testimony if they know their words were recorded, verbatim, and that there is no chance of denying or tweaking testimony in the future. At the same time, police officers should theoretically evaluate probable cause or reasonable suspicion more closely before
they, for example, conduct a filmed stop-and-frisk search. With their actions recorded, both parties should conduct themselves in socially acceptable behavior, without unprovoked hostility. No rational citizen interacting with a police officer should spontaneously turn violent or try to run away. This means that BWCs ultimately become a form of social control.

Social control is “any action, either deliberate or unconscious, that influences conduct toward conformity, whether or not the persons being influenced are aware of the process” (Walsh & Hemmens, 2014, p. 225). Police officers themselves used to be the epitome of social control. They were “the uniformed symbol of law and control…Those who might want to steal…will not do so if they perceive the presence of the officer. People prevented from illegal behavior only by the threat of the officer are externally (directly) controlled” (Walsh & Hemmens, 2014, p. 226). With all of the national attention police departments have received though after the multiple deaths of unarmed citizens in the last few years, one can argue that the police are suffering a crisis of legitimacy. This can be seen in the rising rates of assaults on police officers. According to a National Law Enforcement Officers Memorial Fund (2016) report, firearms-related fatalities for police officers have risen by 78% in the first half of 2016. Nearly half of those fatalities were ambush-style assaults on police officers. While a police officer may still be a deterring enough form of social control to keep someone from shoplifting in front of an officer, these increases in police fatalities reflect a new audacity for criminals undeterred in committing perhaps the most heinous crime: murder. If the community does not perceive the police force as legitimate, then the police’s function as a form of social control deteriorates.
BWCs, however, are potentially a new form of social control, both for the police and the public. BWCs can potentially fill the gap of legitimacy by changing the public’s perception of the police force that serves them. If a disparity arises, a review of the BWC footage could reaffirm the events and help legitimize an accused officer’s behavior. Alternatively, it can also confirm an officer’s misconduct, helping the department weed out bad policemen and policewomen or practices. There could be less of a reliance on he-said, she-said style testimony. Neither the police, nor the community, are more likely to attempt any illegal or socially unacceptable behavior with a camera filming their actions, whether it is racially biased comments or uncooperative hostility towards law enforcement. The limited methodological research conducted on BWCs has already demonstrated such a positive impact on behavior.

2.2 The Rialto and Mesa Police Department Studies

Two of the few methodologically rigorous studies on body-worn cameras conducted so far include a randomized trial with the Rialto Police Department, and a controlled experiment with the Mesa Police Department. Ariel, Farrar, and Sutherland (2015) conducted a field trial on the effects of BWCs on the number of use-of-force occurrences and citizen complaints in Rialto, California. Patrol shifts were split into randomized experimental groups (with BWCs) and control groups (without BWCs) for one year. Out of 25 use-of-force incidences, only 9 occurred with the experimental group wearing BWCs, resulting in over 50% reductions in the use-of-force in comparison to the rates from the previous three years before the experiment (Ariel, Farrar, & Sutherland, 2015). In evaluation to the same previous three years before the experiment, the results also indicated an 88-94% reduction in citizen complaints overall (Ariel, Farrar, &
Sutherland, 2015). “The outcomes suggest a reduction in the total number of incidents of use-of-force in experimental conditions compared to control conditions. We have also observed nearly ten times more citizens’ complaints in the 12-months prior to the experiment, compared to any of the 3 years prior to the experiment” (Ariel, Farrar, & Sutherland, 2015, p. 525). That is a significant reduction in citizen complaints. This study is one of the first to demonstrate the benefits of BWCs with quantifiable data.

Another study in Mesa, Arizona, tested the effects of BWCs on police-citizen interactions. Using another experimental group (officers wearing BWCs) and control group (officers not wearing BWCs), Ready and Young (2015) found that “police officers are more risk averse and cautious about their actions when wearing on-officer video technology” (p. 454). The experimental group conducted fewer stop-and-frisks and arrests, suggesting that officers were more acutely aware of what constitutes adequate probable cause and criminal procedure. “With on-officer video evidence, there is potential for greater scrutiny over criminal procedure and policy violations. Our results suggest that officers are more self-aware when the camera is on because the video may be reviewed internally by supervisors, or by public request…” (Ready & Young, 2015, p. 454). The Mesa study demonstrates statistically how BWCs can influence police behavior, and prevent overzealous incursions of the law during its pursuit.

While the Rialto study looks at the influence of BWCs on citizen complaints and police use-of-force, and the Mesa experiment analyzes police-citizen encounters, there has been no study examining the relationship between the finances for BWCs and police misconduct cases. Before pursuing such a study, however, we will have to first review the research on police civil liability cases.
2.3 Police Civil Liability Cases

Police work by its nature comes with liabilities. “Almost all of the basic duties of police work expose police officers to liability incidents on a daily basis” (Archbold, 2005, p. 33). The police, after all, have significant powers. Detaining people, potentially taking away their liberty, their constitutional rights, or using lethal force is considerable authority to entrust in an unelected civil servant. There are a number of risks and liabilities that expose officers to civil suits.

Legally, a citizen’s federal right to sue the police for misconduct is grounded in the Civil Rights Act of 1871. While there is also an avenue for citizens to bring criminal charges against the government under specific circumstances, “litigation under the civil sections of the legislation is far more frequent, and it represents a greater threat to…municipalities than do criminal charges” (Kappeler, Kappeler, & Del Carmen, 1993, p. 326). Citizens must demonstrate that an officer violated a constitutional or federally protected right during his or her performance as an agent of state law.

A number of court cases since the Civil Rights Act’s passing in 1871 have evolved the tenets of civil liability cases. For example, *Monroe v. Pape* (1961) “broadened the concept of acting under the color of law to include acts by police officers…This opened the door for possible police liability in all cases of constitutional rights violations, including, but not limited to, police abuse of authority” (Kappeler, Kappeler, & Del Carmen, 1993, p. 327). Less than twenty years later, *Monell v. Department of Social Services of the City of New York* (1978) set the precedent for citizens to take action against local units of governments as well, in addition to individual officers or agents of the law. Cities, counties, municipalities, and other local community
governments could now be held liable for their employees’ actions. What is more, “…by the ‘deep pockets’ theory, the Monell decision virtually encouraged the filing of civil liability cases on the expectation that if the police officer is unable to pay damages, the agency can be held liable…” (Kappeler, Kappeler, & Del Carmen, 1993, p. 327). Since local governments are seen to have “deeper pockets” of monetary resources, there is a theory that the Monell decision has encouraged civil suits against governments. Starting in the 1960s, approximately a decade before the Monell case, there was the beginning of a sharp increase in civil suits against the police. In the span between 1967 and 1976, the yearly number of federal civil suits against the police increased over 500% (Kappeler, Kappeler, & Del Carmen, 1993; Hughes, 2001). As mentioned earlier in the introduction, the fiscal settlements allotted from police misconduct cases have increased as well.

At this point in time, civil suits are considered an “occupational hazard” for police work (Hughes, 2001). In a survey of 147 Cincinnati Police Officers, Hughes (2001) found that those with over twenty years of experience were four times more likely to report personal involvement in civil litigation. The longer an officer is on the force, the greater the chances of being subject to a lawsuit. Since all cases must be addressed, regardless of the validity of a plaintiff’s claim, there is inevitably some drain on resources (Hughes, 2001). Even if the police win a lawsuit, there are still bills to be paid for lawyers, insurance premiums, court fees, and the general time taken to address the suit.

In their research paper, Kappeler, Kappeler, & Del Carmen (1993) analyze 1,359 police civil liability cases handed down in the U.S. Federal District Courts between 1978 and 1990. Between that time, monetary awards bestowed from these cases ranged from as low as $1 to $1.65 million. The most common amount rewarded (the mode) was
Awards and attorney fees averaged $121,874. Most noteworthy for this study, though, was the skyrocketing increase of the number of cases. “Since 1985 the number of cases decided by the Federal District Courts has remained between 20 and 40 percent higher than the numbers in the previous years” (Kappeler, Kappeler, & Del Carmen, 1993, p. 331-332). As the rate of lawsuits has increased, so have the monetary awards and the number of cases won by plaintiffs, however not to the extent that this trend has become a majority (Kappeler, Kappeler, & Del Carmen, 1993; Hughes, 2001). Police officers and civic organizations still win more than half of civil liability cases. Kappeler, Kappeler, & Del Carmen’s (1993) work may only represent federal lawsuits, and not local or state court proceedings, but it does include cases filed against municipal police forces, sheriff’s departments, state police departments, federal agencies, and special police forces (such as university campus police or harbor police).

In general, most police officers believe that civil suits do not impact police behavior, because it is difficult to judge what action may lead to a lawsuit or not. In Hughes’ (2001) survey, 86.4% of respondents believed that police officers are sued even when they acted appropriately. “…officers do not place much faith in the ability of civil liability to impact daily actions. Most officers do not believe that it is effective in stopping police officers from violating individual rights or is considered during a police-citizen interaction” (Hughes, 2001, p. 258). Civil suits then, are not a very good tool of risk management (Archbold, 2005).

However, Ready and Young (2015) have already demonstrated the impact of BWCs on police-citizen interactions, exhibiting officers who are more aware of criminal procedure and probable cause. BWCs can potentially help identify the areas of exposure
to lawsuits police officers face, and help protect them against it. Kappeler, Kappeler, & Del Carmen’s (1993) and Hughes’ (2001) research helps create a foundational knowledge of police misconduct cases. Yet, we must still review the various costs associated with not only BWCs, but assaults on police officers as well, in order to properly conduct a descriptive fiscal study.

2.4 Costs Associated with Assaults on Officers

Ready and Young’s (2015) experiment and Arial, Farrar, and Sutherland’s (2015) field trial largely focus on police behavior. Citizen complaints and police use-of-force are a proxy for police officers’ decisions to take action. This does not adequately represent the other subject that is being filmed by BWCs though: the public. The theoretical foundation of this study, deterrence and social control theory, applies to both the police and the public, and for this reason it is necessary to explore assaults on police officers as well.

Besides the potential danger police officers face on a daily basis, there are monetary costs to assaulting a police officer similar to those from police liability court judgements and settlements. The International Association of Chiefs of Police (IACP), in conjunction with the Bureau of Justice Assistance (BJA), collected data from eighteen different law enforcement agencies on reported injuries over the course of one year. In that year, there was a total of 1,295 injuries reported. Each incident resulted in an average of 4.5 days of work missed and 3.5 days used for rehabilitation. This caused a total of 5,938 missed days of work due to injuries (IACP & BJA, 2013). “Based on a 10-hour work day, this total represents 59,380 hours of work time lost. Using a national average annual entry-level salary of $40,000, the approximate total cost for hours lost
from injuries in this study was $1,211,352” (IACP & BJA, 2013, p. 5). Including overtime costs for officers covering shifts and extra medical care fees, the total cost from these 5,938 injuries surpassed $3 million (IACP & BJA, 2013). This is a costly average for injuring a police officer.

The National Law Enforcement Memorial Fund (2016) report has already illustrated the increase in officer fatalities. In another report by COPS (2011), Mora Fiedler, establishes that this increasing trend can be seen even as far back as 2009. While violent crime rates remained steady that year, the number of officers fatally shot increased (COPS, 2011). Police injuries were often most severe when afflicted by individuals under the influence of drugs or alcohol, or by offenders who have had prior contact with the police (IACP & BJA, 2013). If BWCs can help deter and socially control these individuals, it can potentially help increase officer safety.

Police work remains a dangerous profession. If BWCs can decrease the number of assaults on police officers, this should influence associated fiscal costs from missed work time to medical bills to worker’s compensation, that can potentially save a city thousands of dollars. Some of that saved money, however, will have to be reallocated into the cost of the BWCs themselves.

2.5 Body Camera Costs

There are many factors that influence the budget for a police body-worn camera program. The size of the police department, the number of cameras, the number of officers, storage methods, retention policies, recording policies…all effect how costly a BWC program can become. In addition, there are non-monetary considerations, such as police-community relations and crime trends, that will affect the public's demand and a
department’s need for a BWC program. An agency like Philadelphia’s Police Department, with more than six thousand sworn officers servicing a population of well over one million people, will have vastly different characteristics, requirements, and demands from the community than an agency like Aspen’s Police Department, with a population of only a few thousand and an entire departmental workforce of just thirty-seven employees (sworn officers plus civilian personnel) (Philadelphia Police Department website, 2016; City of Aspen website, 2016). The differences in departmental size between Philadelphia’s and Aspen’s police force would create different BWC price tags alone, but the differences in characteristics and community relations could also create different demands from the public that may or may not warrant a BWC program in general. With cameras costing anywhere between a few hundred dollars to just under two thousand dollars, there is potentially drastic variances in purchasing and operating costs for police departments nationwide (COPS, 2014). The storage of BWC footage, however, is perhaps the single most important fiscal consideration.

As Oakland Police Department’s Information Technology Unit’s Acting Sergeant, Officer Burke, stated in a podcast interview in 2015, “Some of the most important things that agencies must be aware of, number one, is storage. The storage component in itself could be a monster for most agencies when it considers body-worn cameras…” (Maxwell & Burke, 2015, p. 1-2). Most police agencies with BWCs will utilize either cloud-based storage (where a private company stockpiles footage on remotely accessible servers) or on-premise storage (where videos are kept on servers physically at the police station). Again, department size, the number of cameras, the number of officers using those cameras etc. will affect which option police department’s will choose.
In addition, other policies, like length of retention and when cameras record events, can influence how much storage a department may need.

The biggest consideration would be the retention of video… you have to realize that the volume, sheer volume of video can be at great numbers. Like, for example, the Oakland Police Department, we currently have upwards of 120 terabytes [1 terabyte = 1000 gigabytes] of video stored. Well, not all that video is actually needed. However, we are bound by policy, which states that we will retain everything for five years (Maxwell & Burke, 2015, p. 3).

Currently, Oakland’s Police Department has very specific guidelines for officers on when to activate their BWCs. They are not required to run their cameras on a continuous basis throughout the entirety of a shift, but instead must turn them on prior to a police-citizen contact or conducting a search warrant (Oakland Police Department, 2016). Otherwise, the amount of footage that would have to be retained for five years would dramatically increase storage requirements. Chief Miller of the Topeka Police Department explains, “I’ve seen a formula that says that if you have 250 officers that have body-worn cameras, in three years you will produce 2.3 million videos. If the officer was required to run the camera continuously during his or her entire shift, it would produce even more” (as quoted in COPS, 2014, p. 44). That is a lot of memory to house, inventory, and maintain.

Storage is often more expensive than the actual cameras, and it is a continuous cost. Fort Worth Police Department, a police force that with over four hundred BWCs has one of the highest numbers of cameras in the nation, spends $527,198 a year for 64 terabytes (TB) of cloud-based storage. For 320 TBs of storage and fees for five years, Taser International receives $2.7 million from the Fort Worth Police Department (Stroud, 2015). On-premise storage, on the other hand, can be cheaper or costlier, depending on what preexisting system a department has or investments it would have to make.
Cloud storage and on premise storage offer unique possibilities for agencies…You know, the Oakland Police Department, we currently use an on premise storage system that where the cost is not that tremendous. You know, looking at buying 500 terabytes for less than $150,000. That is a great solution if you plan on going that route, versus going to the cloud……for the Oakland Police Department, it was a no-brainer. The on premise storage worked out well for us because we already had a system in place (Maxwell & Burke, 2015, p. 2 & 3).

The Oakland Police Department, however, demonstrates how a law enforcement agency must not underestimate the future costs of BWCs, because it soon found its storage needs expanding.

During Oakland’s trial phase in 2009 with just 280 BWCs in deployment, the police department was storing a few hundred gigabytes of footage a month. In 2015, with over 600 BWCs in use, the police force was averaging almost seven terabytes of video a month (almost 7000 GBs) (Brown, 2015). The Oakland Police Department was originally hesitant to try cloud-based storage due to security concerns and their aforementioned already preexisting system. On-premise storage potentially offers a closed network under greater police control. Cloud-based storage involves a third party managing and securing the footage. Again, each police department’s requirements, guidelines, and rules for BWC policies and safekeeping will vary. Until recently, no cloud storage firm met the Oakland Police Department’s security standards. In 2015, though, Vievu LLC and Microsoft collaborated to create a Vievu VERIPATROL on-site management system that met the Federal Bureau of Investigation’s (FBI) Criminal Justice Information Services (CJIS) guidelines. “…until now, most cloud platforms have not met the FBI’s CJIS policies, which enable police departments to connect to the FBI’s systems and securely access its data” (Brown, 2015, para. 3). Vievu’s VERIPATROL is a video management system that allows clients to view and upload / download BWC
footage from the police station, or even in the field from a patrol car (Vievu LLC website, 2016). The VERIPATROL system integrates with Microsoft Azure Government’s cloud, which is an exclusive, secured cloud platform designed solely for U.S. federal, state, and local governments and solution providers (like Vievu LLC) (Microsoft Azure website, 2016). This is a perfect example how technology and costs have changed over time with the growing use of BWCs by police departments.

Furthermore, there are a variety of unforeseen costs that come with a BWC program. Like any technical system, cameras will sometimes require maintenance, backups, upgrades, training for officers, extra man hours for downloading and organizing the footage, and occasionally new positions will have to be created. In Chesapeake, Virginia, the police department had to create a “video evidence coordinator” position to help keep their BWC system organized and current. This was a new job paying $34,000 a year that they had to fit into their budget (Letourneau, 2015).

To conduct an adequate descriptive fiscal analysis of any BWC program, there are numerous variables that must be taken into consideration. The next section will define the scope of a BWC program used for the present study and its cost, police misconduct payments, and the methods used to conduct an explorative financial comparison.
CHAPTER III

METHODOLOGY

This chapter will explain how the data for the present study was collected, and the analytic methods used to reach the succeeding results exploring the impact of the BWC program implementation on police civil liability suit payouts as well as assaults on police officers. As is previously indicated, due to a lack of widely and publically easily available data, as well as time constraints, this thesis is purely a descriptive case study on the Oakland Police Department, and does not include a larger sample of departments. However, the Oakland Police Department appeared to be a textbook candidate for a preliminary evaluation of the BWC program, as is explained below.

3.1 Sample Selection

The use of BWCs by police departments has recently expanded, particularly after the Obama Administration announced more than $23 million in federal funding through the Edward Byrne Memorial Justice Assistance Grant program for local police departments to implement pilot BWC programs (Department of Justice, 2015). The key word there is “pilot programs”. Many of these BWC programs are still in their trial phase and have not been in use for more than a few years or even months, nor completely implemented. The dispersion of BWCs within a department is often limited to just a few districts or shifts during trial periods. In contrast, the Oakland Police Department is one of the few local law enforcement agencies that has used BWCs on a large scale for a number of years. Trials began in 2009. Shortly afterward, the use of BWCs expanded to all street patrol officers. This longevity means that there should be a larger sample of BWC budgetary data available to complement civil rights records. Additionally, the
implementation of a BWC program is one of the most expensive periods because departments must first purchase the cameras themselves. The initial purchasing cost skews the regular annual costs of running a BWC program. Of course, new cameras will have to be purchased in the future for replacements and upgrades, but these procurements should be staggered in comparison to the regularity of standard operating fees.

Admittedly, the Oakland Police Department is not one of the largest police forces in the United States. With 721 sworn officers, it is considerably smaller than police departments in New York City or Chicago, with thousands of sworn officers (Figueroa, 2016). However, the Oakland Police Department has one of the highest numbers of BWCs in use in the nation (Nguyen, Meak, & Villarreal, 2016). Its vast implementation and lengthy use make the Oakland police force ideal for this introductory case study. In addition, Oakland has a long history of police misconduct. In fact, the emergence of its BWC program was inspired by a series of mandatory reforms the department had to undertake because of an astronomical lawsuit. In the fall of 2000, 119 plaintiffs filed suit alleging civil rights violations by four Oakland police officers, notoriously known as “The Riders” (Oakland City Attorney, 2003). The civil rights violations included a staggering array of crimes such as false arrest, excessive force, assault, battery, falsifying police reports, and planting evidence. The City of Oakland reached a negotiated settlement agreement that allotted a gargantuan $10.9 million to the 119 plaintiffs, and mandated several institutional and operational reforms (Oakland City Attorney, 2003). A few years later, the city settled another civil rights suit for $4.6 million, this time in regards to the unlawful public strip search of 39 individuals (Lee, 2012). The city’s long use of BWCs and lingering and expensive history of police misconduct is why it has
merits to be the subject of this explorative study. Using the Oakland Police Department for such an unprecedented study is an apposite first step in studying the financial aspect of BWCs and their implications on civil rights lawsuits and assaults on police officers.

3.2 Data

Data on the Oakland Police Department’s body-worn camera costs and police misconduct financial awards were collected through a variety of public records requests with the City of Oakland. The first request asked for information regarding the Police Department’s BWC budget, including the costs for the cameras and “any associated costs, such as (but not limited to) storage, maintenance, additional equipment etc.” (Public Record Request #16330, 2016). The request was answered in the form of a spreadsheet with payments broken down in monthly increments and the name of the income recipient (the equipment supplier). The following table is the sum of annual costs for the corresponding years. A second public records request was submitted because the response to the original request only included the years between 2012 and 2015. The succeeding public records request asked for annual body camera costs for the year 2010 and 2011.

Table 3.1

*Annual Body-Worn Camera Expenditures*

<table>
<thead>
<tr>
<th>Year</th>
<th>Annual Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>$46,281.16</td>
</tr>
<tr>
<td>2014</td>
<td>$226,791.64</td>
</tr>
<tr>
<td>2013</td>
<td>$101,048.72</td>
</tr>
<tr>
<td>2012</td>
<td>$38,702.66</td>
</tr>
<tr>
<td>Mean Annual Cost</td>
<td>$103,206.05</td>
</tr>
</tbody>
</table>
However, according to the public records office, there was no available data for the years 2010 and 2011. The reasons for the lack of data are unclear. It is not unprecedented for costs to fluctuate during trial periods and during the initial implementation of BWCs, nor for deals to be struck between BWC suppliers and police departments where cameras are provided, or lent out, for free during testing (Arial, Farrar, & Sutherland, 2015). Nonetheless, this is merely conjecture and the reasons are unknown.

The annual cost for BWCs proved to be more irregular than originally anticipated. The significantly higher total annual cost for 2013 and 2014 were due to additional camera and equipment purchases, as well as repairs (Public Record Request #16830, 2016). To take into account the irregularity of these costs and the lack of budgetary data for the years 2010 and 2011, the author found the mean for the annual costs. This mean was applied to the analysis to incorporate fluctuations in costs resulting from maintenance, upgrades, as well as the missing data.

The other public records request asked for the financial portions of police misconduct cases against the Oakland Police Department (Public Record Request #16832, 2016). The records request was answered with a previous public records request from a journalist seeking information on all closed civil rights lawsuits against the Oakland Police Department since January 1st, 1999 (Public Record Request #8839, 2015). The information included a variety of case outcomes, including negotiated settlements, trial judgments, dismissals, and other resolutions. The cases went all the way back to 1999. This detailed information allowed the present study to include monetary rewards from all trial resolutions resulting in a fiscal pay out, as well as include
data from the same time lengths before and after the BWC program implementation in 2009 (i.e., 2003-2015). This data is presented in Table 3.2 below.

Table 3.2

*Total Annual Police Misconduct Pay Outs*

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Spent in Police Misconduct Pay Outs</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003</td>
<td>$467,250</td>
</tr>
<tr>
<td>2004</td>
<td>$3,778,532</td>
</tr>
<tr>
<td>2005</td>
<td>$756,491</td>
</tr>
<tr>
<td>2006</td>
<td>$5,558,350</td>
</tr>
<tr>
<td>2007</td>
<td>$768,550</td>
</tr>
<tr>
<td>2008</td>
<td>$5,467,462</td>
</tr>
<tr>
<td>2009(^1)</td>
<td>$3,776,000</td>
</tr>
<tr>
<td>2010</td>
<td>$12,397,500</td>
</tr>
<tr>
<td>2011</td>
<td>$3,703,000</td>
</tr>
<tr>
<td>2012</td>
<td>$60,250</td>
</tr>
<tr>
<td>2013</td>
<td>$2,378,300</td>
</tr>
<tr>
<td>2014</td>
<td>$1,098,500</td>
</tr>
<tr>
<td>2015</td>
<td>$1,030,000</td>
</tr>
</tbody>
</table>

\(^1\)Marks the year BWC trials began

Furthermore, the data also revealed the number of annual police misconduct lawsuits settled in any given year. Table 3.3, below, categorizes how many lawsuit cases there were in the years between 2003 and 2015. It is important to note that since Public Record Request #8839 was filed in the middle of May, 2015, that year has an incomplete number of cases and pay outs. For this same reason, cases from 2003 only included half a year’s worth of cases as well.

Lastly, the City of Oakland’s End of the Year Crime Reports were collected from the city’s website (City of Oakland, 2011 & 2016). These reports have annual summaries of various crimes that were reported throughout the year, such as murders, assaults, robberies, and more. Plus, these crimes are broken down into subcategories of offenses. For example, in 2009 there were 298 assaults on police officers in Oakland. These 284
Table 3.3

**Total Annual Police Misconduct Cases**

<table>
<thead>
<tr>
<th>Year</th>
<th>Annual Number Settlements</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>6</td>
</tr>
<tr>
<td>2014</td>
<td>12</td>
</tr>
<tr>
<td>2013</td>
<td>22</td>
</tr>
<tr>
<td>2012</td>
<td>16</td>
</tr>
<tr>
<td>2011</td>
<td>19</td>
</tr>
<tr>
<td>2010</td>
<td>27</td>
</tr>
<tr>
<td>2009¹</td>
<td>15</td>
</tr>
<tr>
<td>2008</td>
<td>20</td>
</tr>
<tr>
<td>2007</td>
<td>19</td>
</tr>
<tr>
<td>2006</td>
<td>27</td>
</tr>
<tr>
<td>2005</td>
<td>41</td>
</tr>
<tr>
<td>2004</td>
<td>57</td>
</tr>
<tr>
<td>2003</td>
<td>18</td>
</tr>
</tbody>
</table>

¹Marks the year BWC trials began

*Note. 2003 and 2015 include approximately half a year’s worth of cases*

Table 3.4

**Yearly Assaults against Oakland Police Officers**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Firearm Assault on Officer</td>
<td>3</td>
<td>7</td>
<td>5</td>
<td>3</td>
<td>2</td>
<td>4</td>
<td>2</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Assault on Officer</td>
<td>62</td>
<td>43</td>
<td>51</td>
<td>37</td>
<td>42</td>
<td>24</td>
<td>27</td>
<td>26</td>
<td>29</td>
</tr>
<tr>
<td>Assault on Officer-Other</td>
<td>179</td>
<td>216</td>
<td>228</td>
<td>176</td>
<td>101</td>
<td>84</td>
<td>62</td>
<td>61</td>
<td>83</td>
</tr>
<tr>
<td>Total Assaults on Officer</td>
<td>244</td>
<td>266</td>
<td>284</td>
<td>216</td>
<td>145</td>
<td>112</td>
<td>91</td>
<td>91</td>
<td>113</td>
</tr>
</tbody>
</table>
assaults were systematized into 5 assaults on police officers involving firearms, 51 aggravated assaults (physical contact), and 228 other simple assaults (the threat or attempt of physical harm). The number of assaults on Oakland officers from 2007 to 2015, broken into the three above-mentioned categories, are presented above in Table 3.4.

The goal with this information was to provide auxiliary knowledge to augment the fiscal analysis with assaults against officers incidence data. Financial awards from police civil liability suits is a proxy for police behavior. Crime trends of assaults on police officers, on the other hand, is a proxy for citizen behavior. Information on assaults on police officers in particular would relate to the theory of BWCs serving as a form of social control and influencing people’s behaviors, building upon the results on police-citizen interactions found by Ready and Young (2015). Following this notion, the number of assaults on police officers should decrease after the emergence of BWCs in 2009. This should lead to financial savings for the city from reduced medical costs, missed work costs, and other resultant costs from incapacitated police officers.

3.2 Variables and Analytical Technique

The present study included several dependent variables (DV$s) although no traditional cause-effect analysis such as regression was performed. All DV$s used for the explorative purposes were in longitudinal format, and were either raw dollar amounts or raw incidence numbers. The DV used for the main descriptive part (i.e., visual presentations of the trends) of the analysis was the cost of annual payouts resulting from civil rights violations from police misconduct, while the main variables used for the explorative part (i.e., comparing variable mean differences before and after the intervention) were the various yearly assaults on officers and the yearly number of police
misconduct lawsuits. The data for each of these measures was broken into two groups to reflect a time period prior to (2003-2008) and after (2009-2015) the implementation of body-worn cameras, which was the sole independent (and intervention) variable (IV) of the present study.

Analytical techniques for the present study simply consisted of a visual comparison of tables and figures regarding the pay out trends prior to and after the implementation of the Oakland Police Department’s BWC program. Additionally, classical hypotheses tests were also performed on several variables. Specifically, t-tests with un-equal variances with 95% confidence intervals were calculated to compare mean differences for the following variables prior to (P) and after (A) the 2009 implementation of the Oakland BWC program: total civil lawsuits / settlement payouts, total annual number of police misconduct lawsuits, assaults on police officers with firearms, assaults on police officers without firearms, other (simple) assaults on police officers, and all assaults on police officers combined.
CHAPTER IV

RESULTS

As Table 4.1 indicates, the two-tailed t-tests revealed that there were no significant differences in means between the civil law suits / settlement pay outs or aggravated assaults on officers with firearms prior to (P) and after (A) the implementation of the Oakland Police Department body-worn camera program in 2009. However, there was a significant decrease in the mean number of civil law suits, as well as assaults, other (simple) assaults, and total (all) assaults on police officers after the implementation of the 2009 BWC program.

Table 4.1

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Std. Err.</th>
<th>T-value¹</th>
<th>P-value T &gt; t²</th>
</tr>
</thead>
<tbody>
<tr>
<td>PayOut P</td>
<td>2,799,439</td>
<td>990,384</td>
<td>-0.31</td>
<td>0.62</td>
</tr>
<tr>
<td>PayOut A</td>
<td>3,444,592</td>
<td>1,863,209</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Case Numbers P</td>
<td>30.33</td>
<td>6.39</td>
<td>1.89</td>
<td>0.04</td>
</tr>
<tr>
<td>Case Numbers A</td>
<td>17.00</td>
<td>3.03</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>FireArm P</td>
<td>5.00</td>
<td>2.00</td>
<td>1.79</td>
<td>0.06</td>
</tr>
<tr>
<td>FireArm A</td>
<td>2.67</td>
<td>0.49</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Assault. P</td>
<td>52.50</td>
<td>9.50</td>
<td>3.13</td>
<td>0.01</td>
</tr>
<tr>
<td>Assault. A</td>
<td>30.83</td>
<td>2.89</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Simple Ass. P</td>
<td>197.50</td>
<td>18.50</td>
<td>3.12</td>
<td>0.01</td>
</tr>
<tr>
<td>Simple Ass. A</td>
<td>94.50</td>
<td>17.42</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>All.Ass. P</td>
<td>225.00</td>
<td>11.00</td>
<td>3.55</td>
<td>0.01</td>
</tr>
<tr>
<td>All.Ass. A</td>
<td>128.00</td>
<td>19.37</td>
<td>---</td>
<td>---</td>
</tr>
</tbody>
</table>

¹²T- and P-values reported are for the mean differences between the two variables displaying means for prior and after the 2009 body camera implementation.

Note. Two-tailed t-test with 95% confidence interval was performed.
In other words, the classical hypotheses tests comparing the mean differences of several dependent variables seemed to indicate that a police BWC program had no impact on annual civil liability pay outs in terms of amounts of money paid out. Yet, a police BWC program appeared to have a significant impact on reducing the mean number of the lawsuits each year. Perhaps most importantly, however, officer safety appeared to have significantly improved since the implementation of the BWC program, which could also mean savings to the city in terms of medical and mental health related costs, workman compensation claims, as well as lost work.

As Table 4.1 shows, the mean pay outs after ($3,444,592) BWC implementation have actually increased when compared to the mean pay outs prior to ($2,799,439) BWC implementation. However, this increase was not significant ($t=-0.31$). Figure 4.1, below, further illustrates the trend for police civil liability pay outs over the years. Interestingly enough, there are more annual pay out costs under one million dollars before BWCs were used in 2009. In addition, the year after the use of BWCs began, in 2010, the total annual pay out was the highest of all the years collected. In fact, it was even more than twice that of the second highest year. This outlier can be attributed to the greater-than-usual number of cases in 2010, as well as to two cases in particular that resulted in $4.45$ and $6.5$ million verdicts, respectively. Combined, these cases make up almost ninety percent of the total financial pay outs for that year.

However, the total annual financial sums drop dramatically in the subsequent years, to the lowest point in 2012 with a total of only $60,250. Pay outs over a million dollars before the implementation of BWCs were considerably higher than the pay outs that exceeded a million dollars after the intervention, with the exception of the 2010
outlier. The annual pay out rates fluctuate up and down every year before the intervention. After the intervention, the overall general trend appears to be decreasing for annual pay out sums. Nonetheless, the average pay out for the years prior to the use of BWCs is still smaller than the years after the use of BWCs (a mean of $2.8 million before versus $3.4 million after). This can be attributed to the $12.4 million outlier in 2010. Overall then, the vast array of financial settlements is similar before and after the use of BWCs.

![Figure 4.1: Total Annual Police Misconduct Pay Outs](image)

Looking at the annual police misconduct payouts, in terms of dollar amounts paid out alone, may not provide a completely accurate picture of the impact of the BWC program for the reasons outlined above. Therefore, comparing the means of the actual police misconduct lawsuit *numbers* before and after the implementation of the 2009 BWC program provided additional useful information. As Table 4.1 shows, the mean

![Table 4.1: Average Police Misconduct Pay Outs](image)
number of misconduct lawsuits was significantly reduced from 30.33 per year to 17.00 per year after the implementation of the BWC program (t=1.89).

Finally, as Table 4.1 indicates, the assaults on police officers with firearms dropped from a mean of 5.00 per year to 2.67 after the BWC program began. However, this decrease in the annual means did not reach the significant level (t=1.79). Decreases in the annual means for the rest of the examined assaults on police officer variables were, however, significant after the implementation of the BWC program. Assaults on officers without firearms dropped from an annual mean of 52.50 to 30.83 (t=3.13), other (simple) assaults on officers declined from an annual mean of 197.50 to 94.50 (t=3.12), and the overall assaults on officers decreased from an annual mean of 225.00 to 128.00 (t=3.55). Figure 4.2 further demonstrates the drop in annual assaults on Oakland police officers after 2009, when BWCs began their initial trial periods. It is worth noting that despite a rising earlier trend in assaults on police officers, there was a dramatic reversal after the emergence of BWCs. From the high of 284 total assaults in 2009 to a low of 91 assaults four years later, indicates greatly improved officer safety in the Oakland Police Department.

However, it must be noted that the assaults increased from 2014 to 2015. While the total number of assaults in 2015 is still less than half of the number of assaults from any year prior to the use of BWCs, it is impossible to know whether this is a fluke year or a new trend of increasing assaults on police officers. This could be a reflection of the overall volatile year that it has been for police-citizen relationships nationwide, or a new pattern as a result of changing crime trends or policing tactics. Until the yearly crime trend reports for 2016 become available this question will remain unanswered.
Finally, Figure 4.3, below, visually compares the yearly financial cost of police misconduct payouts with the aggregate of both the yearly financial pay out cost plus the average yearly price of the BWC program. This is the total actual cost of annual expenses for Oakland in regards to these two variables. This is important because police civil liability cases are not going to cease simply because a police department implements a BWC program. BWCs are not a fix-all solution to police-community challenges. There will still be disagreements between law enforcement and civilians that will result in the due process of the judiciary, whether the disputes are warranted or not. However, the literature review has already established a reduction in citizen complaints against misconduct and police use-of-force as a result of a BWC program (Arial, Farrar, & Sutherland, 2015). It is for these particular reasons that one must account for the total
actual cost of civil liability payouts and the cost of the BWC program for the department to be analyzed, as is done in Figure 4.3.

As can be seen, in comparison to the astronomical expenses for police civil liability cases—which frequently surpass seven figure sums—the average annual cost of a BWC program pales in comparison. $103,206 (refer to Table 3.1) is less than one percent of the cost of the most expensive year (2010) for fiscal civil rights judgments ($12,397,500). The cost of a BWC program, then, is not an overly taxing burden for police departments and municipalities, especially if it benefits officer safety and police-citizen interactions.
CHAPTER V
DISCUSSION

In this explorative study, the cost of Oakland Police Department’s BWC program had no influence on the total financial sum of annual police civil liability payouts. Therefore, the costs of a BWC program could not be justified alone due to the decreasing of monetary settlements from police misconduct cases. Nevertheless, the cost of a BWC program is infinitesimal compared to the money spent on police liability cases. As this discussion will explain, the results from this analysis does not mean police departments should disband their BWC programs. Perhaps more importantly, it appeared that BWCs have had an impact on significantly reducing the number of assaults on police officers, which should of course be the number one concern for non-monetary reasons. However, the decrease on officer assaults could also directly reduce multiple employment related costs such as medical and mental health treatment associated with injuries and trauma, workman compensation claims, and lost work time. With this said, there are a number of caveats that are worth mentioning for both results.

When it comes to any type of analysis involving money, one obvious concern is inflation. The value of the dollar fluctuates, sometimes more drastically in one year than another. This partially explains the previously mentioned steady rise in financial settlements over the years from police liability cases (Hughes, 2001; Elinson & Frosch, 2015; Kappeler, Kappeler, & Del Carmen, 1993). The value of the U.S. dollar in 2003 was undoubtedly different than the value of the U.S. dollar in 2015. Using the U.S. Department of Labor’s Consumer Price Index (CPI) Inflation Calculator on the Bureau of Labor Statistics’ website (2016), the total annual amounts of monetary awards were
adjusted to equal the same U.S. dollar value as found in 2015. Comparing the mean annual pay out for the years before the use of BWCs (2003-2008) and after the use of BWCs (2009-2015) resulted in an adjusted total of roughly $3.28 million a year versus $3.74 million a year. The previous unadjusted means were roughly $2.8 million a year before the use of BWCs compared to $3.4 million a year after the use of BWCs. The difference between the unadjusted and adjusted means drops from approximately $690,000 to a difference of $460,000, less than a quarter of a million. This is not a significant amount. Therefore, while inflation does help explain some disparities, it cannot meaningfully take into account the lack of influence BWCs may have on police liability cases.

The lack of inflation’s effects on this paper’s analysis notwithstanding, another caveat remains that must be addressed. The dates collected from the public records request on police misconduct cases were the dates of the conclusion of the cases in court. The annual pay outs from police misconduct cases represented in the previous figures and tables are the total amount of money awarded at the final judgment of cases. This information, however, does not reveal when the alleged police misconduct actually took place. Court cases frequently take many months, if not years, to complete. This means that some of the cases in the ensuing years after the implementation of BWCs could have represented alleged police misconduct from years earlier, before the use of BWCs. This could explain, in part, the surprising significant rise to $12,397,500 in annual liability costs in 2010, the year after the Oakland Police Department began utilizing BWCs.

If this happens to be the case, then there is a potential BWC lag effect that must be considered. It may take more time for BWCs to have an effect on the trend of yearly
police liability awards. The Oakland Police Department was chosen because it is one of the few local law enforcement agencies with the longest running use of BWCs. However, based on the analysis and information in this thesis, six years of data and counting may still be an insufficient period of time for adequate tests to be done.

Although the total amount of assaults on police officers decreased, the number of firearm assaults on police officers has barely fallen. One possible explanation to this incorporates deterrence and social control theory, plus a wider trend on firearm assaults on the police. Recall from the literature review that a report by the National Law Enforcement Officers Memorial Fund (2016) noted the rise in firearms-related, ambush-style fatalities among police officers. If a perpetrator is willing enough to fire upon armed police officers in an attempt to evade capture or serve punishment, then it is possible that deterrence and social control theory do not apply. If someone is willing to go to such an extreme as to murder law enforcement agents for whatever reason—whether to prevent capture and penance or settle a vendetta against the police—then he or she is clearly not deterred or socially controlled by a BWC’s recording of the assault. However, other non-firearm assaults on police officers, such as fist fights and scuffles, have decreased. In this respect, BWCs may have a deterring and socially controlling effect on citizen behavior. A recording that captures how peacefully or reluctantly an individual is arrested or dealt with by the police may deter people’s desire to resist arrest or fight off the police for whatever reason they might have.

5.1 Limitations

One obvious limitation of this exploratory study is the missing data for BWC costs for the years 2010 and 2011 (refer to Table 3.1). This forced the author to utilize a
mean of annual BWC costs to incorporate the missing data, as well as to account for any fluctuations in the yearly costs. As is the norm in statistics, the greater the sample of data the more replicable and accurate the results. The inclusion of the annual costs for the missing years would have provided a more accurate mean to use in this analysis. As the use of BWCs expands, so will the longevity of their use. This will provide even more data and options for sample selections, leading to greater research that incorporates time series effects.

Another limitation in this study is the lack of information on the police misconduct payments. The data used in this study and resulting from the public records requests includes a list of compensated pay outs for police misconduct and civil rights violations. Revealing as this information is, it does not account for how or when these fiscal rewards were allocated. Some rewards, particularly substantial ones allotting upwards of one million dollars, could have been paid out in various increments over time. This would skew the annual financial expenditures in real terms. Higher financial rewards resulting from police civil rights violations settled in one year could thus influence the budgetary and operational costs for the city and the police department for many proceeding years.

Furthermore, this data does not reflect where the money for police misconduct pay outs actually came from, whether the source was the police department’s operational budget, a reserve fund for legal expenses, the city’s general fund, a private insurer, or other. Some of the funds would undoubtedly come from the City of Oakland’s budget, while some of the funds could have come from the city’s insurance provider(s) or police department. Therefore, the actual real cost to the city for these police misconduct
rewards are not known. Future research will have to review Oakland’s insurance policy and budget for a more accurate figure on the expenditures. It could very well be that the actual cost to the city will be less than what was presented in the results, which would force the research to reevaluate its relationship with the cost of BWCs.

Additionally, the coinage could come from various funds within the City of Oakland’s budget. Expenditures for police civil rights violations will not necessarily be paid for out of the Oakland Police Department’s operational budget. The currency for Oakland’s BWC program could derive from a different treasury (i.e. the police department’s budget) than the one that pays for the city’s lawsuit expenditures (i.e. the city’s general fund). High value monetary awards from police liability cases can create ripple effects for other municipal departments and force a reallocation of the budget. This could be another potential subject for future research.

Finally, while the reduction of assaults on police officers is statistically significant, and very important, the degree to which BWCs are responsible for this dramatic drop is uncertain. There are a number of potential outside variables that could potentially influence this drop in assaults. Police-community relations could have improved based on changes in policing strategies. The general trend in crime could have dropped due to a fall in the city’s unemployment rate, creating a drop in dangerous scenarios police officers might face. Police tactics could have become more preemptive and harsher to ensure that assaults on officers decreased. After all, since the “Riders” case in the early 2000s, the Oakland Police Department has undertaken several structural and operational reforms (Oakland City Attorney, 2003). On the other hand, though, assaults on officers could have decreased because police officers were more risk averse
and put themselves in dangerous situations less frequently. Perhaps in fear of the additional oversight BWCs provide, police officers became more reactive and thus avoided high risk situations. Ready and Young (2015) already concluded that officers were more risk averse when wearing BWCs, noting the decrease in arrest rates and stop-and-frisks. However, Ready and Young (2015) also found that officers wearing BWCs initiated “significantly” more contacts with the public than officers not wearing BWCs, demonstrating more proactive policing. In one possible explanation for this proactivity, Ready and Young (2015) argue that BWCs’ oversight motivated officers to be more proactive in case their performance came under review by superiors.

5.2 Future Research

This is an introductory research project that barely scratches the surface of the potential inquiry to be done surrounding police BWCs and their effects. The literature review has demonstrated and Dr. White has proclaimed in his research on BWCs, that there are very few methodological studies on the impact of BWCs (COPS, 2014). In any sort of study, replicability is of utmost importance. This means that future research should replicate this study with other police departments to see how the effects could change geographically and demographically.

Since this is merely a case study, a potential area for future research could include another analysis with multiple police departments that use BWCs. The differences in BWC budgets and any diverging effects these budgets may have on police civil liability pay outs could highlight significant dissimilarities among departments. These dissimilarities could include BWC policy, retention, storage methods, priorities, crime trends etc. With a greater number of police departments, researchers could attempt to
incorporate control variables to see if changes in the trends for police misconduct pay outs as well as assaults on police officers are actually attributable to BWCs or other factors. As mentioned, department policy, operations, demographics, community relations, size, or policing tactics and strategies can vary from one department to the other. For example, a decrease in assaults on police officers can reflect differences in tactical approaches or the application of various police equipment that make an officer’s job safer. Future research can take into account measures of association for other variables that may attribute to any drops in police misconduct or crime trends. Identifying other variables and ways to control them during analytical testing will allow researchers to pin point not just the effects of a BWC program, but the measured degree of a BWC program’s effects as well. As the use of BWCs expands, researchers will have a greater population to select samples from and can purposefully choose similar or dissimilar police departments.

In the future, as more years pass and the amount of available data grows, a time series regression analysis should be undertaken. While time series data is an excellent method in evaluating trends in longitudinal data before and after a certain intervention, the data collected for this thesis is an insufficient estimate for time series models. With more expansive data in the future, a time series regression analysis will be able to measure the effect of a BWC program in the long term, studying if the effects remain constant and level out, expand, or contract over time. Time series regression would also allow future researchers to determine if there actually is a BWC lag by lagging the effect of the program variable.
One last area for future research worth mentioning—but in no way the final study worth conducting—revolves around the content of civil liability cases. Police civil liability cases are often associated with civil rights violations (i.e. searching a home without a warrant or permission) or abuse of authority (i.e. excessive use-of-force or false imprisonment). Future studies should analyze any potential changes in the content of police lawsuits. As previously mentioned, civil liability cases will not cease, but the alleged misconduct might change. The protection of privacy is a concern with BWCs, and it would be interesting to see if any future lawsuits resulted from invasion of privacy allegations by police officers wearing BWCs. If so, this may be a reflection of poor departmental policy or perhaps an aversion by the public to government intrusion.
CHAPTER VI

CONCLUSION

As Thomas Edison is quoted to have said, “I have not failed. I’ve just found 10,000 ways that won’t work.” According to these results, there is no direct fiscal argument to be made that the cost of a police body-worn camera program is justified by the money saved from police civil liability cases. No data was available to quantify potential monetary savings to the city that decreases in assaults against officers brought in. However, not all profits in a cost-benefit analysis should be quantified through dollars. Since evidence from this study tentatively indicated that BWCs indeed appear to significantly decrease assaults on police officers, local law enforcement should not abandon the use or implementation of a BWC program. Human life and safety cannot be monetized, so it is important for future research and consideration to include non-pecuniary benefits.

The limited amount of past research on the impact of BWCs have revealed a variety of benefits. Studies have shown that citizen complaints have dropped, police-citizen interactions have changed, and the use-of-force by police has decreased (Ready & Young, 2015; Arial, Farrar, & Sutherland, 2015). The present study is in line with the past research, showing that citizen use-of-force against the police has likely been reduced as a result of a BWC program. The less force citizens use against the police, the less likely the police are also to have to use force against citizens. Thus, it appears BWC programs would be beneficial to both parties.

More data will become available as a greater number of police departments implement a BWC program and use BWCs for a longer period of time. Longitudinal
studies will be able to measure different consequences and benefits, whether it is in improvements in community relations or better trained police officers. Future research will also answer, however, questions regarding the potential downsides to police wearing BWCs. Will this be the rise of an omnipresent Big Brother state that has recorded and digitized an entire city’s movements and patterns? Will privacy be forfeited every time a police officer wearing a BWC enters a person’s home and archives its personal possessions and details inside, potentially opening up its contents to the public via evidence in courtrooms or public record requests? The possible implications of BWCs go beyond police-citizen interactions. There will be cultural shifts among police officers and the public.

This thesis is merely an introductory and exploratory study into the realm of police BWCs and their potential aftereffects. There is still much to be examined, categorized, tested, and analyzed. This study has exhibited the limitations of the available information to probe at, at this present time. Regardless, as more and more data becomes available it will be important to see just how changes in technology, such as BWCs, can impact society.
REFERENCES


