2018

Police Officers' Perceptions of Body-Worn Camera Technology

Jonah E. Obasi
Walden University

Walden University

College of Social and Behavioral Sciences

This is to certify that the doctoral dissertation by

Jonah E. Obasi

has been found to be complete and satisfactory in all respects,
and that any and all revisions required by
the review committee have been made.

Review Committee
Dr. Barbara Benoliel, Committee Chairperson, Human Services Faculty
Dr. Tina Jaeckle, Committee Member, Human Services Faculty
Dr. Gregory Hickman, University Reviewer, Human Services Faculty

Chief Academic Officer
Eric Riedel, Ph.D.

Walden University
2017

Abstract

Police Officers' Perceptions of Body-Worn Camera Technology

by

Jonah E. Obasi

MA, Grambling State University, 1990

BS, Louisiana Tech. University, 1989

Dissertation Submitted in Partial fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Human Services

Walden University

November 2017

Abstract

In the past several years, police-community relations have received enormous scrutiny based on several high-profile incidents involving the use of deadly force. Politicians, civil societies, and victims' families have called for law enforcement agencies to equip local officers with body-worn cameras to increase transparency and accountability. The purpose of the study was to investigate how law enforcement officers in a Sheriff's office in the Southern United States perceived ease of use and usefulness of body-worn camera technology and to identify if gender and years of service related to police officers' acceptance of body-worn cameras as a component of their regular uniform. The theoretical foundation for this study was based on the Technology Acceptance Model (TAM) developed by Davis in 1989. Paper survey using TAM instrument was used to collect data from officers at the training center. A hierarchical multiple regression analysis was conducted to determine which independent variables predicted the frequency of use of body-worn cameras. Analysis of data collected from 88 officers found that their perceptions of the ease of use of body-worn cameras were moderately and positively correlated with their perceptions of the cameras' usefulness and their attitudes toward the camera. The relationship between usefulness and years of service was negative, indicating that as officers' length of service increased, their perceptions of body-worn cameras usefulness decreased. However, officers' attitudes toward using body-worn cameras were a predictor of their reported frequency of use. Findings from the study could contribute to positive social change by providing policymakers with new tools to craft training policies to enhance police-community relations.

Police Officers' Perceptions of Body-Worn Camera Technology

by

Jonah E. Obasi

MA, Grambling State University, 1990

BS, Louisiana Tech University, 1989

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Human Services

Walden University

November 2017

Dedication

I have had the opportunity to work as a law enforcement professional in the past three years and have come to a conclusion that there are countless officers out there who truly wear their badges with honor. This dissertation is dedicated to those who joined the profession to really serve and protect their community. This tool is for you.

Acknowledgments

The difficulty of attaining this level of education has increased its value to me. While it is not easy to list all those that have influenced my educational desires, I would like to express my sincere appreciation to my wonderful wife, best friend, and mother to my three wonderful children, Dame Ugo Obasi, for her continued unconditional support before and throughout this journey. To my son Balantine, daughters, Ure and Grace, thank you for your support. My success wouldn't have been possible without the sacrifices we made together.

To my dissertation team, what an incredible group you are! The dissertation process became less stressful because of you. I would like to thank my committee Chair; Dr. Barbara Benoliel for her tremendous support and guidance, and for being there for me throughout this journey. I thank Dr. Tina F. Jaeckle and Dr. Greg P. Hickman, for their contributions toward the successful completion of this dissertation. I acknowledge the program director, Dr. William M. Barkley, who saw the social implication of my topic and encouraged me to embark on it.

I would like to thank Major C. Clark and Captain Arlene Brooks in a sheriff's office in the Southern United States for their help in securing permission to engage the sheriff's officers in my data collection. Lastly, I would like to thanks the Almighty God for giving me the strength and wisdom to fulfill my educational desire of attaining a PhD degree.

Table of Contents

List of Tables

List of Figure

Chapter 1: Introduction

Law enforcement officers and citizens rely on each other to reduce crime. Although communities depend on the police for protection, the police's ability to effectively fight and solve crimes depends on their relationships with the communities they serve (Haug & Stockton, 2015). This relationship requires voluntary cooperation from within the community by means of obeying the laws and accepting directives from the police officers (Mazerolle, Antrobus, Bennett, & Tyler, 2013). In addition, the public must perceive the police with legitimate authority to act on behalf of the government with transparency and accountability (Gibbs & Ahlin, 2013). Unfortunately, recently the relationships between police and their communities have worsened throughout the United States, such as in Baton Rouge, Louisiana; South Charleston, South Carolina; Cleveland, Ohio; Ferguson, Missouri; New York City, New York; and Oakland, California, (Goodman & Gonzalez, 2015; Hermann & Weiner, 2014; Mateescu, Rosenblat, & Boyd, 2015; Maskaly & Donner, 2015). The deterioration resulted from mistrust generated by the escalation of police killings of unarmed civilians, especially of Black males (Goodman & Gonzalez, 2015; Hermann & Weiner, 2014; Mateescu et al., 2015; Maskaly & Donner, 2015). Community members questioned the use of unnecessary and excessive force by law enforcement personnel (Ariel, Farrar, & Sutherland, 2014). Leaders in local municipalities began to implement the use of body-worn cameras in response to the demand for a reduction in the use of deadly force by police officers (Miller et al., 2014). Police perceptions of body-worn camera technology and its acceptance are an important

response to the call to equip law enforcement officers with this innovative technology for police transparency and accountability (Abdollah, 2014).

The intention of using the technologically advanced equipment is to help substantiate memory and record direct evidence of interactions between law enforcement officers and the citizens they serve (Harvard Law Review, 2015). Police officers' overuse of force, such as the King beating by Los Angeles Police Department in 1991 and the killing of Thomas by the Fullerton Police Officers in 2011 are potential reminders about the power police officers have and how quickly they can misuse their authority (Farrar, 2014). In addition, these incidents signify how disproportionate use of force could shatter the reputation of the police and lead to social unrest (Farrar, 2014). Over the past few years, several high-profile incidents involving police use of force resulted in increased scrutiny of officers' behaviors and police-community relations by the media and the citizens (Smykla, Crow, Crichlow, & Snyder, 2016).

Police use-of-force continues to be a major source of international concern, inviting interest from academics and practitioners alike (Ariel et al., 2015). The exercise of power by the police using deadly force, whether justified or excessive, can potentially tarnish relationships with community members (Ariel et al., 2014). Police misconduct can translate into complaints against the police, which carry substantial economic and social costs (Ariel et al., 2014; Stanley, 2013; Wine & Cohen, 2015).

To effect social change and improve relations between law enforcement agents and the citizens they serve, many leaders in the judicial and other governmental systems began to mandate equipping law enforcement officers with body-worn cameras (Wing,

2015). Research conducted by the Mesa Police Department over a 10-month period revealed that officers assigned to wear body-worn cameras were less likely to be confrontational with citizens in performing stop-and-frisk, and more likely to interact with the citizenry in a less aggressive manner (Ready & Young, 2015). Despite positive results highlighting beneficial outcomes including improving relationships between the local citizenry and police personnel, barriers impede the rapid acquisition and implementation of the body-worn cameras by law enforcement officers (Wing, 2015). The two biggest obstacles hindering police acceptance of body-worn cameras are concerns regarding individual privacy and the lack of adequate knowledge about the technology (National Institute of Justice, 2016). These two concerns make it difficult to understand how law enforcement officers perceive using the new technology (NIJ, 2016).

In this study, I examine the determinant factors in officers' acceptance of the body-worn cameras and the relationship between the acceptance and the frequency of use. Studies about acceptance of body-worn cameras resulted in a model that is frequently used to look at various adaptations. The technology acceptance model (TAM) developed by Davis, Baggozi, and Warshaw (1989) measures the combined ease of use and the usefulness of new technology to give an overall degree of acceptance. Police officers' acceptance of body worn cameras is the independent variable in this study and is defined more specifically further down as a composite of factors, along with the frequency of use of the camera as the dependent variable. For the purpose of this study, privacy issues were not included in the scope.

Given the expected far-reaching effects of the body-worn camera technology in building better relationships between the police and the community, multiple questions associated with the new technology creates a need to understand law enforcement officers' perceptions and acceptance of the body-worn camera technology (Daly, 2015; Fouche, 2014; Mateescu et al., 2015; White, 2014). Understanding officers' perceptions contributes to the decision-making process related to acquiring and implementing the body-worn cameras by law enforcement agencies (Miller & Toliver, 2014). Further, as suggested by Miller and Toliver (2014), the potential benefits of the body-worn camera technology include the use of the camera as a tool for improving relationships between law enforcement officers and the public in general, along with identifying and correcting internal agency problems. Other benefits may include improving agency transparency while providing evidence documentation for investigations and prosecutions.

Preventing confrontational situations, resolving officer-involved incidents and complaints, strengthening officer performance, and police accountability are additional positive outcomes based on implementing these practices. Finally, knowledge gained from understanding law enforcement officers' perceptions and acceptance of the body-worn camera technology has the potential to inform policymakers challenged to develop and implement policies to fit the needs, resources, and legal requirements of their agencies and communities they serve. Officials will be informed of how the primary users of the technology perceive its use and the factors, which could potentially make the acceptance easier for future use across disciplines.

In this chapter, I provide the background of the study, the problem statement, the purpose of the study, research questions, and hypotheses. I also present the nature of the study, including the theoretical framework I will use to collect and analyze the data. After detailing other information regarding the assumptions, scope, delimitations, limitations, and significance of the study, I will summarize the chapter and transition into Chapter 2.

Background

White (2014) described the body-worn camera as the most recent surveillance technology developed for law enforcement. Manufacturers include Panasonic Vievu, TASER International, Watch Guard, and Wolfcom Enterprise. Body-worn cameras vary in sizes and officers can wear them on a hat, shirt lapel, or sunglasses. Body-worn camera technology is unlike any other surveillance system currently in use, such as stationary mounted cameras on patrol cars (Merola, Lum, Cave, & Hibdon, 2012). The patrol car-mounted cameras have limited views, while attached body-worn cameras record every activity they encounter while on duty (Fouche, 2014; Merola et al., 2012; Schreiber, 2013). These cameras can go with officers into unintended places and capture private conversations between peers if not turned off (Abdollah, 2014). Administrators can use unexpected footage resulting from this technology as evidence in criminal proceedings and as a basis to discipline officers (Abdollah, 2014). Police personnel may worry that some of the materials captured by the camera could damage their career if, for instance, they make a side comment about a supervisor (Abdollah, 2014).

Internationally, British police agencies were among the first to experiment with the body-worn camera technology with the early pilot study in Plymouth, England, in

2005 and 2006 (White, 2014). These pilot studies were known as the Plymouth Head Camera Project (Smykla et al., 2016; White, 2016). Danish police also began a trial of the use of body-worn camera technology in their law enforcement efforts in 2005 (Satter, 2007). In 2009, the Victoria (British Columbia, Canada) Police Department became the first law enforcement agency in North America to implement the body-worn camera (Gillis, 2014). The technology did not gain prominence in the United States until 2014 (Goldman & Gonzalez, 2015; Hermann & Weiner, 2014; Mateescu et al., 2015; Smykla et al., 2016).

Body-worn cameras became a topic of national discussion after the death of Eric Garner at the hands of New York Police in 2014 and the shooting of Michael Brown by police in Ferguson, Missouri, in 2014 (Goodman & Gonzalez, 2015; Hermann & Weiner, 2014; Mateescu et al., 2015). The American Civil Liberties Union (ACLU), which has been known in the past for its strong opposition to surveillance because of privacy issues, advocates equipping the police and the customs and border protection agents with body-worn cameras (ACLU, 2014; Schwartz, 2013). According to Fouche (2014), the ACLU argued, "the benefit of body-worn cameras outweighed the cost surveillance of the American public and the potential invasion of an officers' privacy" (p. 22). President Obama pledged to invest in the camera technology for law enforcement agencies by reimbursing communities for adopting its use (Hermann & Weiner, 2014; University of Cambridge, 2015).

Although researchers conducted three major studies on the body-worn camera, I was unable to locate studies regarding the perceptions and acceptance of the body-worn

cameras by law enforcement officers (Miller & Toliver, 204). The investigators focused on the effect of the device in reducing crime (Smykla et al., 2015). The studies include the Rialto, California police department (February 2012 through July 2013), the Mesa, Arizona police department (October 2012 through September 2013), and the Phoenix, Arizona police department, which lasted a year beginning in April 2013 (Smykla et al., 2015). Further, the National Institute of Justice (2016) noted in a study conducted by the Police Executive Research and funded by the Office of Community Oriented Policing Services in 2013, approximately 75% of police departments surveyed did not have body-worn cameras. With the sudden rush to equip police officers with this new technology, questions and concerns about privacy issues, lack of adequate knowledge regarding the body-worn camera, and the officers' perceptions and acceptance of the device increased (Miller & Toliver, 2014). If officers do not accept body worn cameras, they may not use this technology, and the opportunity to increase policing transparency could be lost.

Following from Miller and Toliver's (2014) study, I fill the gap left by the lack of adequate knowledge about the relationship between police perceptions and acceptance of the body-worn cameras as it contributes to the frequency of their use in everyday policing. In conducting this study, I also attempted to identify possible demographic differences in the officers' gender and years of service related to police officers' overall acceptance of body-worn cameras as a component of their regular uniform. Decision makers may also use the findings to educate law enforcement officers on how to increase use of the technology and thereby increase policing transparency, reducing the use-of-force, and citizens' complaints against the police.

Problem Statement

While police administrators adopt and try to implement body-worn camera technology, there is a concern that police officers will not use the cameras, nor comply with requirements, if implementation is perceived as too difficult or negatively by officers; this negative perception could reduce the potential value of the cameras and interfere with reaching the department's goals (Godoe & Johansen, 2012; Lee, Hsieh, & Chen, 2013). It is unknown whether police officers believe body-worn cameras are useful, or easy to use in their everyday law enforcement activities; key components of successful implementation of new technology. Researchers have not determined if, for this population, ease of use and perceived usefulness of the technology influence the actual use of the cameras and more research is needed (Daly, 2015; Fouche, 2014).

In the wake of escalating killings of unarmed African-American men by the police, municipalities faced pressure to improve relations between law enforcement agents and the citizens they serve, by equipping police officers with body-worn cameras (Berg, 2014; Martinot, 2013; Masklay, & Donner, 2015; White, 2014). Stanley (2013) proposed body-worn cameras have the potential to mitigate encounters between police officers and the public by acting as a check and balance between the two. Researchers also suggested the body-worn cameras could result in positive outcomes, as evidence captured from these cameras can protect the public from police misconduct, and simultaneously help shield officers against false accusations of abuse (Stanley, 2013). Furthermore, Ariel (2016) discussed the usefulness of the technology as both police officers and suspects modify their behavior in the presence of the body-worn cameras.

But in the absence of adequate research and knowledge concerning police acceptance of body-worn camera technology and the relation of acceptance to utilization, law enforcement agencies, the public, congressional officials, and community law enforcement leaders cannot establish criteria or make informed decisions regarding its use (Ariel, 2016). Researchers confirmed that the dearth of knowledge and minimal research available to the top echelons of law enforcement deters decision makers' ability to act regarding the acquisition and implementation of the body-worn cameras in their organizations (National Institute of Justice, 2016).

There is concern about officers' perceptions of the body worn cameras (Mateescu et al., 2015). While officers who support body-worn cameras, and find them easy to use, will help facilitate the implementation and use of this new technology, those who oppose the body-worn cameras may try to undermine the acquisition and practical application of the technology by their agencies (Jennings, Fridell, & Lynch, 2014). There are questions about individual differences in officers' acceptance related to their roles as well as their experiences. These are demographic factors that need further inquiry. There are also questions concerning the usefulness of body-worn cameras, and this is one of the factors in police officers' acceptance; what to do with the footage captured by the body-worn cameras, and when to turn them on and off. Furthermore, "there is no clear-cut universal rule for how long to retain the footage, and what type of footage to flag for review" (Mateescu et al., 2015, p. 14). There is also a question if this technology will perpetuate the *Ferguson effect*, a phenomenon where the fear of having their actions recorded causes law enforcement agents to refrain from performing their duties (Fabian 2015; Rosenfeld,

2015; Timm, 2015). In summary, notwithstanding the above research, I was unable to find research addressing how law enforcement officers perceive the use of body-worn cameras as part of their regular uniform and if this perception will influence the use of the technology.

Purpose of the Study

The purpose of the current study was to use quantitative methods of investigation to understand how law enforcement officers in a large size county sheriff's office in the Southern United States perceive, accept, and use body-worn camera technology and further, to identify possible additional factors that are involved in the acceptance. My primary objective was to contribute new information to assist policymakers in developing and implementing policies that respond to the needs, resources, and legal requirements of various agencies through understanding the relationship between how the primary users of the technology perceive its use, and also ascertain if that perception is important for utilization rates. Documenting this relationship and additional related factors could contribute to broader acceptance by officers in the future. I employed a quantitative exploratory approach to survey participants in sheriff's department during in-service training.

Research Questions and Hypotheses

Following the theoretical framework of TAM (Davis et al., 1989), the research questions and hypothesis relate to how two determinants of acceptance (ease of use and usefulness), their attitude toward using body-worn cameras, and their gender and years of service predict their reported frequency of use of the body-worn cameras.

RQ1. What is the statistical relationship among police officers' demographics (gender and years of service), their overall acceptance of body-worn cameras (ease of use and usefulness), and their attitudes toward using body-worn cameras?

$H_1$1. Police officers' demographics (gender and years of service), their rating of overall acceptance of body-worn cameras (ease of use and usefulness), and their attitudes toward using body-worn cameras are statistically related.

$H_0$1**.** Police officers' demographics (gender and years of service), their rating of overall acceptance of body-worn cameras (ease of use and usefulness), and their attitudes toward using body-worn cameras are not statistically related.

RQ2. To what extent do police officers' demographics (gender and years of service) predict police officers' frequency of use of the body-worn cameras as a component of their regular uniform?

$H_1$2. Police officers' demographics (gender and years of service) are predictors of their frequency of use of the body-worn cameras as a component of their regular uniform.

$H_0$2**.** Police officers' demographics (gender and years of service) are not predictors of their frequency of use of the body-worn cameras as a component of their regular uniform.

RQ3. To what extent do police officers' attitudes toward using body-worn cameras predict their frequency of use of the body-worn cameras as a component of their regular uniform?

*H_1*3**.** Police officers' attitudes toward using body-worn cameras are a predictor of their reported frequency of use of the body-worn cameras as a component of their regular uniform.

*H_0*3**.** Police officers' attitudes toward using body-worn cameras are not a predictor of their reported frequency of use of the body-worn cameras as a component of their regular uniform.

RQ4. To what extent does police officers' acceptance of body-worn cameras as measured by their reported ease of use predict their frequency of use of the body-worn cameras as a component of their regular uniform?

*$H_1$4***.** Police officers' acceptance of body-worn cameras as measured by their reported ease of use is a predictor of their frequency of use of the body-worn cameras as a component of their regular uniform.

$H_0$4. Police officers' acceptance of body-worn cameras as measured by their reported ease of use is not a predictor of their frequency of use of the body-worn cameras as a component of their regular uniform.

RQ5. To what extent does police officers' acceptance of body-worn cameras as measured by their reported usefulness predict their reported frequency of use of the body-worn cameras as a component of their regular uniform?

$H_1 5$. Police officers' acceptance of body-worn cameras as measured by their reported usefulness is a predictor of their reported frequency of use of the body-worn cameras as a component of their regular uniform.

$H_0 5$. Police officers' acceptance of body-worn cameras as measured by their reported usefulness is not a predictor of their reported frequency of use of the body-worn cameras as a component of their regular uniform.

Theoretical Framework

The theoretical framework for this cross-sectional, exploratory study is the TAM, developed by Davis et al. (1989) as a derivative of Fishbein and Azjen's (1975) theory of reasoned action (TRA) (Baron, Patterson & Harris, 2006; Godoe & Johansen, 2012). I selected the TAM because of its well-documented acceptance as one of the most commonly used models for understanding and predicting the usage and acceptance of information technology by individuals (Godoe & Johansen, 2012). Using the TAM supports explaining the relationship between a new technology user and internal psychological variables such as attitudes, beliefs, and behavioral intentions (Davis et al., 1989; Godoe, & Johansen, 2012). The two central determinants in the TAM are (a) perceived ease of use and (b) perceived usefulness. Together these determinants form a measure of construct that is, for purposes of this current study, called acceptance of the technology. The perceived ease of use refers to the belief by an individual that using a specific instrument will require little or no effort, and perceived usefulness refers to the

belief that using the new technology will enhance the individual's job performance (Godoe, & Johansen, 2012). I did not look at the success of the process of the adoption of the new technology. Instead, I explored the officers' perceptions of the technology after it is in use. The process required a one-time data collection from a cross-sectional sample of the population, and therefore a survey was the best method for this study.

Nature of the Study

The nature of the study is an exploratory, descriptive, survey using previously validated instruments to understand how law enforcement officers in a southern county sheriff's office in Georgia perceive and accept the body-worn camera technology, and also if the acceptance relates to their rate of using it as part of the regular uniform. The dependent variable is the frequency of use as part of a regular uniform, and the independent variables are the demographic categories and acceptance of the body-worn cameras as measured by their self-report of the ease of use and usefulness combined into one measure overall. Using the survey tool, I collected the officer's gender and years of service and inquired about the police officers' overall acceptance of body-worn cameras as a component of their regular uniform. Quantitative methodology allows for the collection and testing of numeric samples of opinions or attitudes in a survey (Bansel & Corley, 2012). The result of the hierarchical regression analysis may provide new information about variables related to police officers' acceptance of body-worn cameras as a component of their regular uniform.

I used a previously developed and independently validated survey instrument for collecting and analyzing my data. The survey questionnaire is a preexisting instrument

that measures the two central determinants in TAM as provided in Davis et al. (1989). Previous researchers established and documented the reliability and validity of the instrument (Davis et al., 1989). I asked the participants about how frequently they use body-worn cameras as part of their uniform. The use of the cameras as measured on a continuum was the dependent variable for this study. After collecting data from the sample survey, I evaluated the information using hierarchical regression analysis. In Chapter 3, I provide details concerning the variables, research design, and rationale. I also discuss the methodology and threats to validity

Definitions

Acceptance of the body-worn camera: Acceptance of the body-worn camera is defined in this study as the degree to which participants from a southern county sheriff's office in Georgia is willing to comply with wearing the body-worn cameras as part of their daily uniform.

Body-worn camera: White (2014) described the body-worn camera as the most recent surveillance technology developed for law enforcement. Manufacturers include Panasonic Vievu, TASER International, Watch Guard, and Wolfcom Enterprise. Body-worn cameras vary in size and officers wear them on hats, shirt lapels, or sunglasses (Ariel, 2016).

Deterrence: Deterrence in this study is defined as a mechanism used to convince an aggressive adversary to refrain from his or her aggressive action (Taquechel & Lewis, 2012).

Ferguson effect: Ferguson effect is a phenomenon where law enforcement agents fearful of the use of recording devices, hold back from performing their duties (Fabian, 2015; Rosenfeld, n.d.; Timm, n.d.).

Frequency of use as part of the regular uniform: The use as part of the regular uniform in this study applied to a southern county Sheriff's officers participating in this study who are expected to wear body-worn cameras on a daily basis as part of their uniform as they are required to wear their duty belt. This is the dependent variable.

Perceived ease of use: Perceived ease of use as described in TAM, refers to the belief by an individual that using a specific instrument will require little or no effort (Davis et al., 1989).

Perceived usefulness: Perceived usefulness from TAM, refers to the belief that using the new technology will enhance the individual's job performance (Davis et al., 1989).

Police perceptions: Sims (2016) defined perception as the act of extracting meaning from noisy and sensory signals leading to the choice of what information a person retains. Police perceptions, in this study, refer to the way a southern county sheriff's officers think about and understand the technology of the body-worn camera.

Years of service: For the purpose of this study, years of service are the number of years a participant has served as a sworn officer with the southern county sheriff's department.

Assumptions

I assumed that the TAM survey instrument was reliable and valid based on evidence from previous studies on other technology adaption; for this current study, I altered exactly one word from the original TAM survey to reflect camera technology (Davis et al., 1989). I further assumed that data were collected reliably, that only qualified participants completed the survey and that the participants understood the survey questions and responded honestly. In Chapter 3, I address additional assumptions and limitations related to the data analysis for this study.

Scope and Delimitations

In this current study, I focused on the perceptions and acceptance of the body-worn cameras by the sworn officers at a southern county sheriff's office. I chose a region diverse in population and size, not considering other geographical differences such as between rural and urban areas. I visited the training center and distributed a paper survey to in-service trainees. The survey contained the invitation to participate, instructions on how to complete the survey, the consent form, and the questionnaire. I did not include actual measures of compliance with the body-worn camera because I was not considering whether officers ever had a questionable incident where the body-worn camera could have been exculpatory evidence.

I used paper questionnaires instead of a web-based questionnaire because some participants were not able to complete a web-based questionnaire due to their lack of familiarity with computer programs. I chose to employ convenience sampling, a non-representative subset of a large population in this study, because I realized the inability to

generalize the results of this study (Bernard, 2013). States outside of the southern region of the country do not have the same historical reference to police relationships and would differ in their use and acceptance of body worn cameras.

Limitations

There were three limitations associated with this study. The first is the impossibility of determining if the participants in the data collection process would respond promptly. This may cause the study to take an unanticipated period to complete. Second, it was also possible some of the participants would not have experience with the body-worn cameras which could have a significant impact on the response bias, response rate, and therefore affect the validity of the findings. Third, I limited the participant pool to a convenience sample of sworn officers only. The pool did not include a segment of the civilian population in the southern county sheriff's office.

Significance of the Study

The significance of this study is that it may provide insight into how southern county sheriff officers perceive and accept body-worn cameras as a component of their regular uniform. I can use the outcomes to address a gap in the literature concerning the perceptions of officers using body-worn camera technology. Although law enforcement agencies are rushing to equip their officers with body-worn cameras, previous studies suggest there is no clear universal rule on use and storage of the images they capture (Mateescu et al., 2015). I have found no empirical evidence of officers' perceptions of wearing body-worn cameras. Knowledge gained from the results of this study may have direct implications for policymakers in the region selected for this inquiry. Disseminating

the results of this study ultimately has the potential of educating law enforcement leadership, giving them the newly acquired knowledge to craft policies for positive social change, by developing better training for the officers on the importance of the body-worn cameras. The new insights gained may inform those in positions to help improve relationships between law enforcement agencies and the communities they serve.

Summary

Emerging technology cannot deliver improved organizational effectiveness without the cooperation and acceptance of potential users; therefore, it is important to understand the perceptions of the frontline handlers of the body-worn camera technology (Venkatesh & David, 2000). I sought to determine if a relationship exists between the acceptance and use as part of the regular uniform in this population. Furthermore, I attempted to identify possible underlying factors such as the officers' gender and years of service. In conducting this quantitative exploratory survey, I examined whether these additional considerations have a relationship to police officers' overall acceptance of body-worn cameras as a component of their regular uniform. Despite the privacy issues and the multiple questions associated with the body-worn camera technology, it is important to understand law enforcement officers' perception and acceptance of the body-worn camera technology (Fouche, 2014; Mateescu et al., 2015; White, 2014). Understanding participating police officers' opinions as frontline users of the body-worn camera can be an important construct in the decision-making process related to the acquisition and implementation of the technology in other enforcement agencies.

In this chapter, I introduced the study by describing the background, the problem statement, and the purpose of the study. I stated the research questions and hypotheses and identified the theoretical and conceptual frameworks for the study, while also providing the rationale for the research design. Additionally, I provided definitions of key variables and an overview of the assumptions, scope and delimitations, and significance of the study. Finally, I concluded this chapter with a summary of the study's potential contribution to social change.

In Chapter 2, I present the literature review that supports the research. First, I inquire into the theoretical foundations of TAM (Davis et al., 1989) and TRA (Fishbein & Ajzen, 1975) and elucidate how the variables of interest manifest in officers' acceptance of body-worn cameras. In addition, I explore other secondary theories such as deterrent theory and self-awareness theory in relation to body-worn cameras. Finally, I conclude Chapter 2 with an extensive review of the literature as it relates to the body-worn camera and officers' acceptance of the new technology.

I include a detailed rationale and methodological design for the study in Chapter 3. Furthermore, I present an overview of the hypotheses, data collection, population under analysis, processes relating to recruitment, and sampling procedures. In addition, I examine potential threats to both internal and external validity. Finally, I describe the measures taken to prevent ethical conflict within the study and the importance of safeguarding participants.

In Chapter 4, I present the findings related to the analysis of the data. In Chapter 5, I summarize the study, provide a discussion of the results, draw conclusions from those

findings, and share recommendations for policy change and future research. In my final conclusion, I highlight the study's implications for social change.

Chapter 2: Literature Review

In an attempt to effect social change by improving relations between law enforcement agents and the citizens they serve, local, state, and national leaders have been called upon to equip law enforcement officers with body-worn cameras (White, 2014). Researchers have identified two obstacles against police acceptance of body-worn cameras including the concern for individual privacy, and lack of adequate knowledge about the new technology (Daly, 2015; Fouche, 2014; White, 2014). These two barriers invoke valuable questions that underscore the goals of this study, which are to examine law enforcement officers' perceptions of the body-worn camera technology and to consider what the determinant factors are in officers' acceptance of the body-worn cameras as part of their daily uniform.

However, a significant percentage of the literature reviewed on body-worn camera technology reflected positive outcomes and potential benefits for both law enforcement officers and the public. For example, implementation of the cameras could result in identifying and correcting internal agency problems, improving transparency, and evidence documentation for investigations and prosecutions (Miller & Toliver, 2014; Stanley, 2013). Other advances offer the realization of strengthening officer performance by enhancing police accountability including preventing confrontational situations, resolving officer-involved incidents, and complaints (Miller & Toliver, 2014; Stanley, 2013). I conducted this current study to understand law enforcement officers' perceptions of the body-worn camera technology and the acceptance factors through the lens of a southern county sheriff's officers.

My primary goal of the literature review was to identify associated articles focusing on body-worn camera technology. I used the local county public library and internet based searches through the Walden University Library to identify information. The web search through the Walden University online library was the primary resource for this literature review based on its extensive national and international catalog of data. In this literature review, I employed a comprehensive literature search strategy by choosing filters that exclusively selected peer-reviewed journals, books, and documents from multiple databases, primarily Education Research Information Center (ERIC), ProQuest Criminal Justice, Oxford Criminology Bibliographies, SAGE Premier, and SocINDEX with Full Text. Other searches included Google Scholar to identify empirical articles, published controlled trials, and systematic reviews. I also examined theoretical concepts published in research contained in peer-reviewed articles, documents, and records such as newspapers, magazines, books, websites, and trade journals, for example, Law & Order, and Law Enforcement Technology.

The review also contains the exploration of Davis et al.'s (1989) technology acceptance model (TAM), which provided the theoretical foundation for this study. Davis et al. (1989) derived TAM from Fishbein and Ajzen's (1975) theory of reasoned action (TRA), deterrence, and self-awareness theories. Keywords and phrases relating to body-worn camera technology used to search for articles included *academic research, acceptance, body-worn camera, deterrence theory, law enforcement, patrol car- mounted camera, police brutality, police-community relation, police killing of unarmed black men, police perception, police misconduct, police shootings, privacy issues, self-awareness*

theory, surveillance system, technology, technology acceptance module, and theory of reasoned action.

Since the body-worn camera is relatively new technology, I used a date range of 2012-2017 to select empirical literature for this study. For the theoretical materials, I set the search parameter date between the early to the mid-20th century. This strategy provided a timetable that connected specific theories to the variables of interest. Notwithstanding the above research, when I conducted a search for police perceptions of the body-worn camera technology through the ProQuest Criminal Justice database, I was unable to find exact matches addressing law enforcement officers' perceptions or acceptance of the body-worn cameras as part of their use in their regular uniform. However, there were 146 results of articles related to body-worn cameras, mostly from trade journals such as Law & Order, Law Enforcement Technology, Surveillance and Society, Campus Law Enforcement Journal, Tactical Response, FBI Law Enforcement Bulletin, and Law Enforcement Product News. The exclusion of vital issues related to officers' perceptions of body-worn cameras revealed a gap in the literature that I hoped to contribute to with this study.

Theoretical Foundation

I explored various theories to support laying a foundation on how law enforcement officers perceive and accept body-worn cameras. The theories I examined and present in this study are Davis et al.'s (1989) TAM, derived from the Fishbein and Ajzen's (1975) theory of reasoned action (TRA). Other theories I considered included deterrence theory and self-awareness theory. I highlighted TAM as the theoretical

framework that best supported this study as a theoretical framework. In addition, researchers cited TRA as a conceptual framework, which emphasized the relevance of TAM and how it undergirded the understanding and prediction of the usage and acceptance of information technology by individuals (Godoe & Johansen, 2012; Lee et al., 2013; Park, 2009; Zhang & Xu, 2011).

Emerging technology cannot deliver improved organizational effectiveness if the potential users of the technology do not accept its use (Venkatesh & David, 2000). Adaptation and use of new technology in the workplace remains a major concern for both organizations and developers as people struggle to understand why individuals accept or reject its use (Davis et al., 1989). Beginning in the early 1970s, researchers focused their efforts on trying to identify the factors that enhance rapid integration of information technology into businesses (Legris, Ingham, & Collerette, 2003). In 1985, Davis et al. proposed TAM, which examined the mediating role of perceived ease of use and thoughts regarding usefulness (Legris et al., 2003). Despite the considerable progress made in the past few decades in explaining and predicting user acceptance of new technology in the workplace, understanding and creating conditions under which the humans will embrace it remains a high-priority research issue (Venkatesh & David, 2000). People face challenges when confronted with new technology relating to users' beliefs and attitudes, satisfaction measures, adaptation to change, awareness, education, and the role of culture (Zhang & Xu, 2011).

According to Park and del Pobil (2013), researchers have attempted to understand why people accept or reject new technology for over two decades. In exploring ways to

explain or predict worker's acceptance of new technology, researchers concentrated their efforts on developing and testing models (Legris et al., 2003; Park, 2009). One of the models tested is the Davis (1986) TAM. TAM is a model developed by Davis in 1986 as a derivative of Fishbein and Ajzen's (1975) TRA, which assesses a user's acceptance of emerging technology.

Researchers have widely accepted TAM as one of the most commonly used and successful models for understanding and predicting the usage and acceptance of information technology by individuals (Godoe & Johansen, 2012; Lee et al., 2013; Park, 2009; Zhang & Xu, 2011). Using TAM helps researchers explain the relationship between a new technology user and internal psychological variables such as attitudes, beliefs, and behavioral intentions (Davis et al., 1989; Godoe & Johansen, 2012). Five constructs of TAM (see Figure 1) include external variables, perceived ease of use, perceived usefulness, attitude, and intention (Park & del Pobil, 2013).

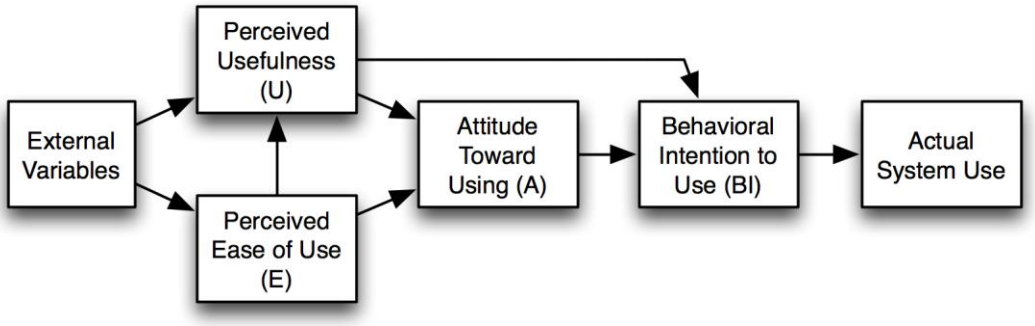

Figure 1. Original technology acceptance model. Adapted from "User Acceptance of Computer Technology: A Comparison of Two Theoretical Models" by F. D. Davis, R. P. Bagozzi, and P. R. Warshaw, 1989. *Management Science, 35*(8), p. 984.

The two central determinants, perceived usefulness and perceived ease of use, are significant antecedents of behavioral intentions embraced by the TAM model (Baron, Patterson, & Harris, 2006; Godoe & Johansen, 2012; Lee et al., 2013; Zhang & Xu, 2011). The basic concept of TAM is, "the more a user perceives a technology to be useful, the more the user believes it is easy to use, and the more the user intends to use the technology" (Zhang & Xu, 2011, p. 202). In order words, determining an individual's behavioral intention to use a new technology rests on two beliefs, perceived ease of use, and perceived usefulness (Gardner & Amoroso, 2004; Vankatesh & Davis, 2000).

Davis et al. (1989) conducted a longitudinal study that addressed the ability of 107 participants to understand the reason why people accept or reject computers better. The participants were full-time MBA students at the University of Michigan who participated in a 14-week study. The researchers used the WriteOne word processor to answer four questions:

- How well do intentions predict usage?
- How well do TRA and TAM explain intention to use a system?
- Do attitudes mediate the effort of beliefs on intentions?
- Are there alternative theoretical formulations that better account for observed data? (Davis et al., 1989, p. 989)

TAM's usefulness and ease of use were each operationalized with 4-item instruments resulting from an extensive measure development and validation procedure. Developers and providers of e-learning wanted to get a better understanding on how students perceived e-learning elements and the most efficient method of delivering the

technology. Park (2009) conducted a study on university students' behavioral intention to use e-learning by analyzing the TAM. A sample of 628 college students participated in the study. The researchers concluded the data collected indicated participants' beliefs concerning usefulness and ease of use of a course website as an excellent and efficient learning tool (Park, 2009).

Perceived Usefulness

Lee et al. (2013) asserted perceived usefulness refers to the belief that using the new technology will enhance the individual's job performance. Prospective user's subjective probability that using technology will increase his or her job performance within an organizational context is an important determinant of acceptability of the technology (Venkatesh & David, 2000). Scales measuring the perceived usefulness include(a) work more quickly, (b) job performance, (c) increased productivity, and (d) effectiveness in making the job easier.

Perceived Ease of Use

While perceived usefulness refers to the belief that using the new technology will enhance the individual's job performance, perceived ease of use refers to the belief by an individual that using an instrument (technology) will require little or no effort. A prospective user will expect the technology to be free of effort (Godoe & Johansen, 2012; Lee et al., 2013; Park, 2009; Zhang & Xu, 2011). Measuring perceived ease of use includes how clear and understandable, controllable, skillful, along with how easy it is to learn, use, and remember (Godoe & Johansen, 2012; Lee et al., 2013; Park, 2009; Zhang & Xu, 2011).

Numerous studies found TAM as a model, which consistently explained substantial variation in technology usage intentions (Legris et al., 2001; Lee et al., 2013; Zhang & Xu, 2011). Ambrose (2004) confirmed perceived usefulness as the primary factor affecting all the constructs related to user acceptance of the technology. In building upon the theoretical construct of the TAM, Venkatesh and Davis (2000) placed their emphasis on understanding the antecedents of the perceived ease of use. The result shows the "less effortful a system is to use; the more using it can increase job performance" (Venkatesh & Davis, 2000, p. 192).

Conceptual Framework

The conceptual framework for this study was based on several theories. I used these theories as an analytical tool to show the organization of ideas in the study. These theories include the theory of reasoned action (TRA), deterrence theory (DT), and self-awareness theory (ST).

Theory of Reasoned Action

Fishbein and Ajzan (1975) posited TRA to be the best model for predicting behavioral intentions. Researchers use the theory to explain the correlation between an individual's intention and actual behavior (Legris et al., 2001; Park & del Pobil, 2013). Fishbein and Ajzan (1975) provided three conditions, which substantially alter the quality of the relationship between intention and behavior:

- The degree to which the measure of intention and the behavioral criterion correspond to their levels of specificity.

- The stability of intentions between the time of measurement and performance of the behavior.
- The degree to which carrying out the intention is under the volitional control of the individual.

Madden et al.'s (1992) research provided support that TRA is a model widely used to predict behavioral intentions and has proven useful in targeting and identifying areas indicating behavioral changes. Davis (1980) chose TRA, a well-established theoretical model of human behavior from a psychological perspective, as a foundation upon which to build a new model, the TAM. For this study, I hypothesize that each police officer's behavioral intention to use body-worn camera will correlate with the three conditions cited above and determined by the two beliefs, that body-worn camera is useful and easy to use (Gardner & Amoroso, 2004; Madden et al., 1992; Vankatesh & Davis, 2000).

Deterrence Theory

Deterrence is a mechanism used to convince an antagonistic adversary to refrain from his or her aggressive action (Taquechel & Lewis, 2012). Such a deterrent includes using a camera for recording and instantly replaying the event surrounding the accused police misconduct or public allegations against an officer (Emery, Leo, Fyfe, & Hobson, 1998). Thomas Hobbes (1588-1678), Cesare Beccaria (1738-1794), and Jeremy Bentham (1748-1832) were the seminal philosophers of the deterrence theory of punishment (Carson, 2014). Together, these theorists set the stage for viewing the cost-benefit analysis of offender decision-making (Carson, 2014). They protested the spiritualistic

explanations of crime and the dominant legal policies that controlled European thought for decades (Carson, 2014). Consequently, they provided the foundation for the modern-day deterrence theory in criminology (Carson, 2014). The proponents of deterrence believed people do not choose to disobey or violate the law without first calculating the gains and consequences of their actions. Paternoster (2010) argued the concept of deterrence is simply an omission of criminal activity to avoid sanctions or punishment.

Overall, proving the effectiveness of the deterrence theory is challenging. Only undeterred offenders face legal consequences; therefore, the reason why others do not offend may never be known. Nagin (2013) concisely summarized the empirical knowledge and the current state of deterrence theory in an essay entitled *Deterrence in the Twenty-First Century.* In 2016, the National Institute of Justice published Nagin's essay to help both policymakers and lawmakers enact policies and laws based on science. Unlike the early classical thought that believed deterring crime is based on anticipated sanctions or punishments imposed based on the criminal act, Nagin argued the fear of apprehension was a more powerful deterrent than the punishment (National Institute of Justice, 2016; Paternoster, 2010).

Both scholars and practitioners have vigorously discussed and debated deterrence theory for decades and researchers showed deterrence occurs only when an actor discourages another aggressive actor (Taquechel & Lewis, 2012). They suggested the outcome prevents the aggression toward the non-aggressive actor (Taquechel & Lewis, 2012). In other words, convincing an aggressor to refrain from aggressive actions toward another deters their behavior (Taquechel & Lewis, 2012). Such deterrents include

recordings and instant review of footage in the event of police misconduct or public accusation against an officer (Emery et al., 1998). Although philosophers theorized deterrence theory provided adequate weight in preventing criminal-minded individuals from committing certain criminal acts if the punishment outweighs the gain, others disagreed. Gibbs (1978) challenged the concept of deterrence theory based on the homicide decline in the 1960s when there was no clear empirical evidence suggesting severe punishment was the true deterrent. Building upon Gibbs (1978) premise, I am basing the deterrence theory on Nagin's (2013) concept, which stated,

> The evidence in support of the deterrent effect of the certainty of punishment is far more consistent than that of the severity of punishment. However, the evidence in support of certainty's effect pertains almost exclusively to apprehension probability. Consequently, the more precise statement is that certainty of apprehension, not the severity of the ensuing legal consequence, is the most effective deterrent. (p. 1975)

Research conducted by the Mesa Police Department during a 10-month period revealed officers assigned to wear body-worn cameras were less likely to be confrontational with citizens in performing stop-and-frisk, and more likely to interact with the citizenry in a less aggressive way (Ready & Young, 2015). A 12-month use of force research conducted by the University of Southern Florida in 2014, showed police use of force and civilian complaints declined dramatically when both officers and civilians had an awareness of the use of a recording device (Wing, 2015). Ariel et al. (2014) pointed out monitoring changes in people's behavior, acts as the theoretical basis

for the use of body-worn cameras as a deterrent for both law enforcement officers and citizens. Therefore, police acceptance and proper use of body-worn cameras could be a deterrent against aggressive community policing.

Self-Awareness Theory

Self-awareness theory reflected the idea that when people pay attention to themselves through introspection or other ways similar to camera recordings, they judge themselves based on their values (Farra, 2014). In addition, when people are self-aware, they tend to exhibit conscious acts instead of passive reactions. Self-aware people tend to practice good psychologically healthy behavior and display a positive outlook on life (Farra, 2014).

In 1972, psychologists Duval and Wicklund developed the theory of self-awareness and considered it a technique for self-control (Silvia & Duval, 2001). Duval and Wicklund (1972) referred to self-awareness as the cornerstone of emotional intelligence. The researchers asserted the key to understanding ourselves, being at peace with our inner-selves, and managing emotions is our ability to monitor our emotions on a regular basis (Silvia & Duval, 2001). In this study, I assumed when people are aware of being surveilled, the fear of capture while involved in criminal activity will contribute to them displaying good behavior. These include both the surveilling and the surveilled.

Police-Community Relations

To serve and protect is a phrase made famous by the Los Angeles Police Department and adopted, in various forms, by law enforcement agencies across the United States (Los Angeles Police Department, 2016). The former president of the

National Sheriffs' Association stated, "We print it on our letterhead, we paint it on our patrol cars, we embroider it on our uniforms, and we verbalize it in our speeches" (Smith, 1998, p. 5). Police are to protect the communities they serve, and the majority of police officers across the United States perform these duties honorably every day (Ariel et al., 2016). Police officers from across the country put their lives on the line daily to maintain order and protect citizens from crime (Bolger, 2015; Gibbs & Ahlin, 2013). But time and time again we learn through the news media video coverage of police officer's application of force often does not equate the situation at hand (Sela-Shayovitz, 2015). Some videos will show officers inability to de-escalate tense situations during engagements with the public (Sela-Shayovitz, 2015). Similarly, it is clear that some citizens' behavior toward law enforcement promulgates the use of force, often through a verbal or physical assault on the officers (Ariel et al., 2014). Instances of uncooperative citizens abusing police officers result in aggressive arrests and use of more police force (Ariel et al., 2014). The question is not whether police can use force to control or prevent crime as they maintain a substantial risk of encountering violence in their line of duty (Bolger, 2015). The public questions how police can minimize their use of force. Takagi (2014) asserted the law enforcement profession is the second most dangerous job in the United States, and sadly, on average someone kills an officer of the law every 57 hours, as well as 62,000 assaulted and over 21,000 injured each year. According to an FBI reports published in the Uniform Crime Report on officers killed in the line of duty, in 2014, civilians feloniously killed 51 officers (FBI, 2014).

According to an article published by the College of Policing (n.d.), police can use reasonable and necessary force to achieve a lawful objective when making an arrest, trying to subdue a resisting individual, acting in self-defense, or protecting others. For example, the King beating by Los Angeles Police Department in 1991 and the killing of Thomas by the Fullerton police officers in 2011 are reminders of the enormous power police officers have and how things can quickly go wrong when they use excessive force (Farrar, 2014). In addition, these incidents signify how the disproportionate use of force can shatter the reputation of the police and lead to social unrest (Farrar, 2014).

Ariel et al. (2014) pointed out the motivation to change behaviors by using body-worn cameras aligned with the deterrence theory. Increased use of body-worn cameras is a common recommendation for reducing police-community misunderstandings (Bud, 2016). Recordings from body-worn cameras can give police supervisors, judges, reporters, and others an accurate depiction and objective evidence of what transpired during police-citizen encounters (Smykla et al., 2016). This is a major reason for proposing the adaptation of body-worn cameras by law enforcement agencies (Bud, 2016). Politicians, civil societies, and victims' families have called for law enforcement agencies to equip local officers with body-worn cameras to increase transparency and accountability (Smykla et al., 2016). The devices can also reduce police officer's exposure to litigation and unwarranted complaints from citizens (Miller & Toliver, 2014). Bud (2016) and Ramirez (2014) also acknowledged the importance of the body-worn cameras as part of police officers' equipment, arguing that equipping officers with cameras will save municipalities money, and decrease the cost of lengthy litigation.

Surveillance Systems

Surveillance cameras are valuable tools in the fight against crime (Coleman, 2012). As police-community relations deteriorate, political and civic organizations including families of victims demanded more transparency and accountability from the police (Smykla et al., 2016). They proposed body-worn cameras as a surveillance mechanism to enhance the ability of police to respond to the myriad of complaints registered against them (Bud, 2016). Other added the need to incorporate other surveillance equipment such as the dashboard camera (DBC), and the license plate reader (LPR), already in use by some police departments (Merola, Lum, Cave, & Hibdon, 2012). Barnard-Wills and Wells (2012) argued surveillance systems gather important information, especially when the purpose of the surveillance is to support the practice of control, organization, management, or influence. Furthermore, Haggerty, Wilson, and Smith (2011) posited surveillance, viewed as a technology of governance, is an integral feature of social control, disciplinary power, and modern subjectivities.

Dash board camera (DBC). The goal of DBC or the in-car cameras is to provide true and accurate evidence and documentation of events through audio-visually recording police-citizen encounters (Taylor, 2016). Despite the job most police officers do every day, the biggest citizen's complaint is racial profiling (McNeeley & Grothoff, 2016). In this current study, I accept Kamalu's (2016) definition of racial profiling as, "the disparate and disproportionate targeting of racial minorities for traffic stops, searches, arrests, detention, and charges" (p.189). Although the Supreme Court ruled it illegal for police officers to stop and detain an individual without reasonably suspecting an

individual of committing a crime, based on the Fourth Amendment of the US Constitution (Goldstein, 2013). However, according to an article published by the New York Times editorial board on August 12, 2013, over the years, police departments, especially the New York Police Department (NYPD) adopted strategies emboldening police officers to stop and question mostly minority citizens first, and then come up with the reason for questioning them afterward. While many racial profiling victims walk away with traffic tickets, too often the outcome of racial profiling was death (Editorial Board, 2013). Examples of racial profiling, in which concluded with the death of the victims before the introduction of body-worn cameras include Gammage in Brentwood, Pennsylvania; Diallo, in Bronx, New York, in 1999, and Thomas, in Cincinnati, Ohio, in 2001 (American Civil Liberty Union, 2016).

Local citizens challenged stop and frisks laws, which they determined to be based on race instead of probable cause, unaccompanied by warrants. In the 1990s, law enforcement agencies across the United States faced multiple lawsuits alleging race-based traffic stops (Westphal, 2004). The court ruled in favor of many complainants, affirming the existence of racial profiling (Westphal, 2004). The court rulings eroded public confidence in the police and strengthened their mistrust. In order to rebuild public trust from citizens, police executives began the adoption and implementation of DBC in patrol cars to record police encounters with the public, especially traffic stops (Westphal, 2004). The administrators believed the recordings would provide an unbiased account of events occurring during police-public encounters (Westphal, 2004). Videotapes revealed

what occurred during negative interactions and what role either the officer or the citizen played, which may have provoked a confrontation (Emery et al., 1998).

The federal government through the Department of Justice's Office of Community Policing Services Orientations developed a program offering financial incentives to state law enforcement agencies who adapted DBC. Between 2000 and 2003, the program disbursed $21 million to 47 states and the District of Columbia (Westphal, 2004). Dashboard cameras are still in use by law enforcement agencies to record interactions between both police and citizens during traffic stops.

License plate reader (LPR). There has been a proliferation of police use of LPR technology as a tool for law enforcement in their war against stolen vehicles and vehicle plates despite privacy concerns and an estimated cost of $20,000 per unit (Lum, Hibdon, Cave, Koper, & Merola, 2011). This straightforward and easy to understand equipment developed by the British Police Scientific Development Branch in 1976 has its roots in the United Kingdom. LPR is either mounted on a police patrol vehicle or attached to a fixed location (Waddle, 2016). The equipment can scan up to 1,800 license plates per minute at any time of the day (Merola et al., 2012; Waddle, 2016).

Similar to other new technologies associated with law enforcement, the public opposed the introduction of LPR because of legal and legitimate implications (Merola et al., 2012). The police claimed LPR allowed them to automate the vehicle verification process against law-enforcement databases (Merola et al., 2012; Waddle, 2016). Proponents of LPR cite the many potential uses of the device for law enforcement personnel (Gordon, & Wolf, 2007). For example, investigators could develop a list of

possible leads by comparing information from LPR database to place a suspect within close range of crime scene (Gordon, & Wolf, 2007). Studies conducted in North America on LPR include the Ohio State Highway Patrol study in 2005, which focused on the efficacy of LPR in detecting stolen vehicles. The results of the 4-month study revealed police use of LPR in Ohio increased the arrest and recoveries of stolen vehicles in comparison to the previous year (Lum et al., 2011).

Opponents of LPR, which included the American Civil Liberties Union (ACLU), cited concerns for individual privacy (Gordon & Wolf, 2007). ACLU highlighted unintended issues could result from improper storage and enforcement of offenses of uninvolved vehicles (Merola et al., 2012). A report published in 2013 by the ACLU, claimed one million license plate scanned in Maryland resulted in approximately 2,000 registration or emission issues, while 47 in every million hits related to significant criminal issues (Waddle, 2016).

Body-worn camera technology. Patrol car-mounted cameras display limited views of an occurrence; body-worn cameras attached to an officer's uniform records every activity or encounter daily (Fouche, 2014; Merola et al., 2012; Schreiber, 2013). The cameras go with officers into unintended places and can capture private conversations between officers if they do not turn off the camera (Abdollah, 2014). The ACLU, known for its strong opposition to surveillance because of privacy issues, advocates for equipping the police and the customs and border protection (CBP) agents with body-worn cameras (ACLU, 2014; Schwartz, 2013). According to Fouche (2014),

the ACLU argued, “the benefit of body-worn cameras outweighed the cost surveillance of the American public and the potential invasion of an officer’s privacy” (p. 22).

Wine and Cohen (2015) asserted over the past decade, the level of police brutality continued to increase, along with public outcry denouncing the results. For example, the shooting death of Brown in 2014 in Ferguson, Missouri resulted in a civil disobedience across the country (Lieb & Zagier, 2014). The controversy and conflicting accounts surrounding the death of Garner at the hands of New York Police in 2014, and the killing of Rice, in Cleveland, Ohio are evidence of rising police brutality against minorities (Bud, 2016; Goodman & Gonzalez, 2015; Hermann & Weiner, 2014; Mateescu et al., 2015). Furthermore, the shooting death of Yatin by a Toronto police officer in 2013 started a debate in Canada about equipping police officers with the body-worn cameras to enhance police transparency and accountability (Ramirez, 2014; Rogan, 2014).

Proponents of the surveillance system believe the use of body-worn cameras provided a way to restore faith in law enforcement agencies and simultaneously vindicate police officers in light of potentially unwarranted accusations (Schoemann, 2012). Individuals who believe police are abusive, biased, and even racist can rely on images captured by the body-worn cameras to prove or disqualify their allegations (Garrison, 2015). Some police welcome the concept of deploying body-worn cameras as an apparatus to provide a clearer record of what transpired in police-citizen contact. Garrison (2015) believed surveillance systems such as the patrol car videos, news videos, commercially established videos, and videos from individual private cameras could defend police officers falsely accused of misconduct by the citizens.

However, many police officers remained skeptical about the body-worn cameras and unconvinced of their efficacy. Those who opposed the body-worn cameras cite several concerns. They argued the recordings may not clearly depict the accurate occurrence of an event during police-citizen encounters (Garrison, 2015). The Las Vegas Police Protective Association President argued the implementation of the body-worn cameras represented a clear change in working conditions, citing its newly added requirements to an officer's daily routine (Schoemann, 2012). The association threatened legal action if the department purchased and implemented the use of the cameras without contractual considerations. Other opponents of the surveillance system include the National Association for the Advancement of Colored People (NAACP), Legal Defense Fund, and the American Civil Liberties Union (ACLU). The main two barriers cited by these groups are the concern for the loss of individual privacy and the lack of adequate research and knowledge about the technology (Daly, 2015; Fouche, 2014; White, 2014). Members of the groups argued cameras mounted on every corner, and the body of police officers is an invasion of citizens' privacy by the government, and view the use of the systems as attempts to spy on private residents (Menichelli, 2013; Strub, 1989).

Literature Review Related to Key Variables

Stanley (2013) asserted body-worn cameras have the potential to mitigate encounters between police officers and the public by serving as a check and balance between the two. Stanley (2013) stated body-worn cameras capture evidence that has the potential to protect the public from police misconduct and at the same time help protect officers against false accusations of abuse. However, in the absence of adequate research

and knowledge about the body-worn camera technology, community leaders, congressional officials, and law enforcement leadership have no established criteria to make decisions regarding appropriate and legal policies and procedures (National Institute of Justice, 2016).

There is concern about officers' perceptions of the body worn cameras (Mateescu et al., 2015). While officers who support body-worn cameras will help facilitate the implementation and use of this new technology, those who oppose body-worn cameras may try to undermine the acquisition and practical application of the technology by their agencies (Jennings, Fridell, & Lynch, 2014). Further, there are questions about individual differences in officers' acceptance in relationship to their roles and previous experiences. For instance, while younger officers who are technological savvy may find the new technology as essential equipment in their arsenal in fighting crime, senior officers, or those who are less savvy with technology, may view the use of advanced technology from a different lens (Davis et al., 1989; Mateescu et al., 2015).

Good officers are more likely to accept body-worn cameras as the captured images will help exonerate them in the case of false accusation of brutality by the public (Stanley, 2014; Wing, 2015). On the other hand, the bad apples among law enforcement officers may see the use of the cameras as a hindrance from practicing brutality against citizens (Stanley, 2014; Wing, 2015). There are questions concerning what to do with the footage captured by the body-worn cameras and when to turn them on and off (Mateescu et al., 2015). The researchers posited, "There is no clear-cut universal rule for how long footage should be retained, and what type of footage should be flagged for review" (p.

14). There is also a question if this technology will perpetuate the Ferguson effect (Fabian 2015; Rosenfeld, n.d.; Timm, n.d.). Therefore, it is uncertain how law enforcement officers will perceive the new technology.

The search results included three primary studies related to body-worn camera technology conducted in the United States. From February 2012 through July 2013 the Rialto California police department study utilized a randomized control to empirically test the use of the police body-worn cameras by measuring the effect of videotaping encounters between police officers and the public (Ariel et al. 2014). The Mesa and Phoenix, Arizona police departments used a survey instrument containing 33 questionnaires clustered in eight subjects (White, 2014). The questions ranged from accuracy and speed to their overall opinion of the cameras (White, 2014). Also, in 2014, the University of Georgia's Police Department conducted research to understand officers' attitudes on the deployment of the body-worn cameras in their patrol division (Fouche, 2013). The researchers attempted to quantify officers' attitudes by conducting an online survey, using a questionnaire consisting of 12 questions (Fouche, 2013). Merola et al. (2012) used a random-sample survey in their study to understand the potential legal and legitimacy issues related to LPR in Fairfax County Virginia.

I employed a quantitative method of investigation to understand how law enforcement officers in a southern county sheriff's department perceive and accept the body-worn camera technology and the relationship between their acceptance and its use as part of the regular uniform. I also attempted to identify underlying demographic factors such as the officers' gender and years of service that may relate to police officer's

overall acceptance. I employed a quantitative exploratory approach by surveying the selected southern county sheriff officers. The chosen methodology is consistent with the approach used in the previous studies mentioned above.

The quantitative method of analysis is best suited for this study because it allows me to use a naturalistic approach to understanding the phenomena in a real setting without manipulating the phenomenon of interest (Golafshani, 2003; Rudestam & Newton, 2015). The ability to collect data quickly at the same point in time is the strength of the chosen methodology (Rudestam & Newton, 2015). The method has nominally associated costs and minimal subject attrition. Finally, it is suitable for exploratory research and answering questions concerning who, what, when, and where (Golafshani, 2003). On the other hand, the limitations include the inability to examine the process of development with individuals (Golafshani, 2003; Rudestam & Newton, 2015). It cannot establish cause and effect and has no control of the independent variable. Quantitative method fits perfectly with my study due to my limited time and resources as a student. I present a more detailed methodology in Chapter 3.

Summary

Given the expected far-reaching effects of the body-worn cameras in building better relationships between the police and the community, it is vital to understand law enforcement officers' perception and acceptance of the technology (Daly, 2015; Fouche, 2014; Mateescu et al. 2015; White, 2014). This understanding will be a major construct in the decision-making process related to the acquisition and implementation of the body-worn cameras by law enforcement agencies. Further, as suggested by Miller and Toliver

(2014), there are potential benefits of improving relationships between law enforcement officers and the public with the application of the body-worn camera technology. These benefits include rebuilding trust between police and their communities where trust has been damaged, improving agency transparency, and increasing police accountability. Finally, social activists, the media, and policymakers endorse the adaptation and implementation of the body-worn cameras by law enforcement agencies as a tool to build better relationships between police and the community (Smykia et al., 2015).

In Chapter 3, I present the rationale and design for the study. I provide an overview of hypotheses, data collection, population under analysis, processes relating to recruitment, and sampling procedures. In addition to the examination of the psychometric instruments I selected for this research, I provide operational definitions of the variables with their associated constructs, the data analysis plan with the procedural outline that I employed in this study, and potential threats to internal and external validity.

Chapter 3: Research Method

The purpose of the study was to investigate how law enforcement officers in a large southern county sheriff's office perceive, accept, and use body-worn camera technology and to identify possible factors that are involved in the acceptance. I examined the relationship between the frequency of use of the body-worn camera as part of their regular uniform, their perceptions of the ease of use and usefulness of the body-worn camera, their attitudes toward the body-worn camera, and selected demographic variables. The demographic variables were the officers' gender and years of service, which may relate to police officers' overall willingness to incorporate body-worn cameras as a component of their regular uniform.

In this chapter, I provide an overview of steps I used to address the research questions. I also describe the population and the sample of participants used to collect data. I describe procedures for sampling, recruitment, data collection, operationalization of the variables and the data analysis plan. In addition, I discuss threats to external, internal, and construct validity, and potential ethical concerns.

Research Questions and Hypotheses

To understand how law enforcement officers in a southern county sheriff's office perceive and accept the body-worn camera technology, I addressed the following research questions and hypotheses:

RQ1. What is the statistical relationship among police officers' demographics (gender and years of service), their overall acceptance of body-worn

cameras (ease of use and usefulness), and their attitudes toward using body-worn cameras?

$H_1$1. Police officers' demographics (gender and years of service), their rating of overall acceptance of body-worn cameras (ease of use and usefulness), and their attitudes toward using body-worn cameras are statistically related.

$H_0$1. Police officers' demographics (gender and years of service), their rating of overall acceptance of body-worn cameras (ease of use and usefulness), and their attitudes toward using body-worn cameras are not statistically related.

RQ2. To what extent do police officers' demographics (gender and years of service) predict police officers' frequency of use of the body-worn cameras as a component of their regular uniform?

H_1*2*. Police officers' demographics (gender and years of service) are predictors of their frequency of use of the body-worn cameras as a component of their regular uniform.

H_0*2*. Police officers' demographics (gender and years of service) are not predictors of their frequency of use of the body-worn cameras as a component of their regular uniform.

RQ3. To what extent do police officers' attitudes toward using body-worn cameras predict their frequency of use of the body-worn cameras as a component of their regular uniform?

$H_1$3. Police officers' attitudes toward using body-worn cameras are a predictor of their reported frequency of use of the body-worn cameras as a component of their regular uniform.

$H_0$3. Police officers' attitudes toward using body-worn cameras are not a predictor of their reported frequency of use of the body-worn cameras as a component of their regular uniform.

RQ4. To what extent does police officers' acceptance of body-worn cameras as measured by their reported ease of use predict their frequency of use of the body-worn cameras as a component of their regular uniform?

$H_1$4. Police officers' acceptance of body-worn cameras as measured by their reported ease of use is a predictor of their frequency of use of the body-worn cameras as a component of their regular uniform.

$H_0$4. Police officers' acceptance of body-worn cameras as measured by their reported ease of use is not a predictor of their frequency of use of the body-worn cameras as a component of their regular uniform.

RQ5. To what extent does police officers' acceptance of body-worn cameras as measured by their reported usefulness predict their reported frequency of use of the body-worn cameras as a component of their regular uniform?

$H_1$5. Police officers' acceptance of body-worn cameras as measured by their reported usefulness is a predictor of their reported frequency

of use of the body-worn cameras as a component of their regular uniform.

H_05. Police officers' acceptance of body-worn cameras as measured by their reported usefulness is not a predictor of their reported frequency of use of the body-worn cameras as a component of their regular uniform.

Research Design and Rationale

This study collected responses from police officers in a large southern county sheriff's department. I used the TAM developed by Davis et al. (1989) to understand police officers' acceptance of the body-worn camera technology. In the original TAM, the questionnaire contained questions about a system (electronic mail) widely used in the laboratory (Davis et al., 1989). In this study, the questionnaire contains items regarding body-worn camera technology. McCusker and Gunaydin (2014) asserted that a quantitative researcher explores relationships between variables and uses a correlational design.

Research Design

I used a cross-sectional, quantitative design for this investigation. The decision to use a quantitative method arose from the need to understand how law enforcement officers perceive and accept the body-worn camera technology. I chose quantitative methodology because I collected and analyzed numeric data to determine relationships between variables (Bansel & Corley, 2012; Bernard, 2013). I also selected the cross-sectional design because I could collect data from a sample at a single point in time

(Bhattacherjee, 2012; Bowden, 2011; Hagan, 2013; McCusker & Gunaydin, 2014). I considered a longitudinal design but decided not to because the research questions were not designed to look at the development of body-worn camera acceptance over time (Babbie & Rubin, 2017).

I used a convenience sample, a nonprobability sampling technique, because it allowed for the collection of samples from readily available participants (Etikan, Musa, & Alkassim, 2016). Convenience sampling also is affordable and accessible (Etikan et al., 2016). Unlike a purposive sampling technique, which is constructed to serve a particular need or purpose, convenience sampling requires using what is readily available (Bernard, 2013; Etikan et al., 2016; Noordzij, Dekker, Zoccali, & Jager, 2011).

Variables

The independent (or predictor) variables were police officers' acceptance of body-worn cameras, as measured by (a) officers' perceived ease of use, (b) perceived usefulness, (c) officers' attitudes toward body-worn cameras, and the officers' (d) gender and (e) years of service. The TAM survey was used to measure the police officers' perceived ease of use, perceived usefulness, and attitudes toward body-worn cameras. Demographic questions collected participants' gender and years of service. The police officers' self-reported frequency of use of the camera was the dependent variable.

Past Research Using the TAM

The TAM survey has been used to measure attitude, perception, and acceptance of new technology. Davis et al. (1989) employed the 10-item measurement scale to measure perceived ease of use and perceived usefulness with 112 IBM employees in Canada's

Toronto Development Laboratory. Fouche (2014) administered a 5-point Likert scale to measure 52 officers' attitudes on the implementation of body-worn cameras in the patrol division of the University of Georgia's police department. Finally, Park (2009) used the TAM to determine 628 university students' attitudes toward e-learning.

Population

Employees of a sheriff's office in the South represented the target population. A research population is defined by Castillo (2009) as a large collection of individuals who are the primary focus of a scientific query. This sheriff's office employed 829 sworn permanent positions and 218 permanent civilian positions. The 829 sworn officers who have the potential of engaging with the public include deputy sheriffs and detention officers in the court division, law enforcement division, and jail. While the ideal scenario for every researcher is to test every individual in a population to obtain reliable, valid, and accurate results, in a large population such as the current study, I chose not to test every individual because of time and monetary constraints. Therefore, I relied on population sampling.

Sampling and Sampling Procedures

I used convenience sampling, a non-representative subset of a large population (Bernard, 2013), in this study. With the need to survey a characterological discrete population (i.e., sworn officers with similar training), there is a temptation to employ purposive sampling methods, which are non-probability techniques based on characteristics of the population such as gender and years of service (Babbie, 1990; Fowler, 2014). However, convenience sampling is the appropriate sampling technique for

this study because it reflects the population sufficiently to provide a useful picture of what is happening. Convenience sampling is also an inexpensive and practical method, although it does not allow researchers to generalize results (Bernard, 2013).

The researcher must carefully select a sampling method that will yield the best supporting evidence for the research inquiry because the procedure can dramatically influence sampling variability (Bernard, 2013; Winhusen et al., 2012). I considered convenience sampling as an appropriate technique in this study, even though it may not be an actual representation of the total population. Convenience sampling is also consistent with this type of research. For example, Davis et al. (1989) used a convenience sample of system developers from IBM to test the relationship between technology acceptance, its perceived ease of use, and its usefulness.

Procedures and Sampling Size

I used G*Power and the conventional values for power, alpha, and effect size common to social science research and the use of an *F* test in multiple regression analysis (Cohen, Cohen, West, & Aiken, 2013; Petrocelli, 2003). In calculating the sample size, I set the effect size f^2 to .15, alpha to .05, power to .80, and the number of predictors to five. The calculated sample size through G*Power was 92 participants.

I structured participation in this study to complement, not interfere, with the officers' duties and ensured that they did not suffer any financial consequences if they participated. Each member of the survey population received a package that included an invitation to participate, an informed consent form, and the questionnaire. I circulated the package at the beginning of each in-service training week (usually Monday) and picked

up completed questionnaires from the trainers on the last training day (usually Thursday). The in-service trainers allowed participants to complete the questionnaire during breaks from training or they could take the questionnaire home and return it on Thursday. This allowed participants time to review the package and decide if they wanted to participate. This process is consistent with the procedure used by Davis et al. (1989).

Procedures for Recruitment, Participation, and Data Collection

The sheriff's department conducted in-service training each week from February to September 2017. I visited the training center and distributed a paper survey to in-service trainees at the beginning of two training weeks. Approximately 60 officers were in those training sessions (N = 120). I considered collecting the data using an anonymous, web-based questionnaire distributed to participants through an online server. Unlike paper surveys, which are time-consuming to distribute, electronic surveys are typically faster and more cost efficient because of the expedited implementation and data import facility (Dillman, 2000). Although the web-based surveys have demonstrated efficacy as an important data collection tool in studies of information technology (Parks, 2009), I was convinced by the program director at the training center to use the paper survey method. This process was determined to be an easier way to access the sample needed to conduct my study.

The survey contained an invitation to participate, instructions to complete the survey, a consent form (see Appendix A), and questionnaire. The participants were asked to complete the questionnaire away from work to prevent unnecessary and unauthorized

overtime. The participants were not offered monetary compensation. There was a warning for the participants not to write their name or ID number on the questionnaire.

Instrumentation and Operationalization of Constructs

After a search of the literature to find available instruments to measure how and why people accept new technology, I discovered TAM. Davis et al. (1989) developed and then administered the questionnaire to IBM employees in Canada to measure their attitude toward a computer-based information system. I employed the TAM survey to measure the extent to which police officers' perceptions of ease of use and usefulness of body-worn cameras predicted their frequency of use. I secured permission to use TAM instrument (see Appendix B).

With a minor change in language to reflect the questions posed to law enforcement participants, I used the instrument as developed by Davis et al. (1989). For example, the information technologies such as Electronic mail and XEDIT, which the author of the instrument was testing, were replaced with a body-worn camera to reflect the current investigation (see Appendix C and Appendix D). Field-testing resulted in TAM's acceptance as one of the most commonly and successfully used models for understanding and predicting the usage and acceptance of information technology by individuals (Godoe & Johansen, 2012; Lee et al., 2013; Park, 2009; Zhang & Xu, 2011).

Questionnaire

A questionnaire is a measuring instrument used in survey research to collect data from participants. The advantages of using a questionnaire over other types of surveys include cost efficiency, requiring less effort from the questioner, and unlike verbal or

telephone surveys, questionnaires use standardized answers (Sauermann & Roach, 2013). Researchers can disseminate surveys to thousands of respondents at a relatively low cost by regular mail or email, saving money and time. On the other hand, disadvantages of using a questionnaire include the possibility of users becoming frustrated with standardized answer choices (Kimberlin & Winterstein, 2008; Sauermann & Roach, 2013). Furthermore, respondents must read the questions before they can respond. Questionnaires limit the number of respondents who participate because some might prefer speaking than reading and writing when responding to questions (Sauermann & Roach, 2013). Therefore, questionnaires are not suitable for conducting surveys in demographic groups who can neither read nor write (Wright, 2005).

I used a previously developed and independently validated survey instrument to collect and analyze my data. The survey questionnaire is a preexisting instrument that measures the two central determinants in TAM, perceived ease of use and perceived usefulness (Davis et al., 1989). Together these determinants form a measure of construct called *acceptance of the technology*. Previous researchers have established and documented the reliability and validity of the instrument (Davis et al. 1989; Venkatesh & David, 2000). I asked the participants to rate their perceived ease of use, perceived usefulness, attitude toward use of the body-worn camera, and frequency of use of the body-worn camera as part of their uniform. The frequency of use of the body-worn camera is the dependent variable.

Independent Variables—Perceived Ease of Use and Perceived Usefulness

I used two scales to measure perceived ease of use and perceived usefulness of body-worn cameras. The participants used a 7-point Likert scale that ranges from 1 (*strongly agree*) to 7 (*strongly disagree*) to respond to 10 items that measure their perceptions about the ease of use of the body-worn camera and to 10 items that measure their perceived usefulness of the body-worn cameras. Two scale scores were created by calculating the mean of the completed items in each scale. Before the scale scores were computed, the participants' responses were reversed so all variables in the research questions could be interpreted in the same direction (i.e., high score indicates agreement or good attitude). Therefore, the two scale scores (perceived ease of use and perceived usefulness) ranged from 1 (*strongly disagree*) to 7 (*strongly agree*).

Independent Variable—Attitude Toward Use of Body-Worn Camera

I used five 7-point semantic differential rating scales to measure the participants' attitudes toward using body-worn cameras. I used five adjectives pairs (a) good-bad, (b) wise-foolish, (c) favorable-unfavorable, (d) beneficial-harmful, and (e) positive-negative to measure the police officers' attitude toward using body-worn cameras in their job. An attitude score was created by calculating the mean of responses to the five differential rating scales. Before the scale scores were computed, the participants' responses were reversed so all variables in the research questions could be interpreted in the same direction (i.e., high score indicates agreement or good attitude). Therefore, the attitude score ranged from 1 (*poor attitude*) to 7 (*good attitude*).

Independent Variables—Gender and Years of Service

Two demographic questions were designed to collect the participants' gender and years of service. The independent variable gender was dichotomous (0 = *female,* 1 = *male*). The independent variable years of service was measured using a scale from 1 (*2 or fewer years*), 2 (*3 to 5 years*), 3 (*6 to 10 years*), 4 (*11 to 20 years*), to 5 (*21 or more years*) and was used as a continuous variable in the analyses.

Dependent Variable—Frequency of Use

The dependent variable, frequency of use, was obtained using a scale that ranged from (1) *don't use at all,* (2) *use less than once each week,* (3) *use about once each week,* (4) *use several times each week,* (5) *use about once each day,* and (6) *use several times each day*. The range of the scale, therefore, was from 1 (*not at all*) to 6 (*frequently*) and was used as a continuous variable in the analyses.

Operationalization of Constructs

TAM's usefulness and ease of use scales were operationalized using a 4-item instrument, resulting from an extensive measure development and validation procedure. Developers and providers of e-learning wanted to get a better understanding of how students perceived e-learning elements and the most effective method of delivering the technology. Park (2009) conducted a study measuring 628 university students' behavioral intention to use e-learning by analyzing the TAM. The results revealed TAM was an appropriate theoretical tool to measure users' acceptance of e-learning. The study concluded that the TAM results reflected usefulness and ease of use of a course website as an excellent and efficient learning technology (Park, 2009).

Data Analyses

To test the research hypotheses, I used SPSS to perform the statistical analyses. I conducted Pearson product moment correlations to determine the relationship among the independent variables (ease and usefulness of body-worn, attitude toward the camera, and gender and years of service). The correlation coefficient can range from -1 to 1, with a larger value (approaching 1 or -1) indicating a stronger relationship. If both test scores tend to increase or decrease together, the correlation coefficient is positive. If one test score increases as the other score decreases, the correlation coefficient is negative (Minium, 1978). Evans (1996) suggested the strength of a correlation coefficient could be described as *very weak* (.00 – .19), *weak* (.20 – .39), *moderate* (.40 – .59), *strong* (.60 – .79), or *very strong* (.80 – 1.00).

I then conducted a hierarchical multiple regression analysis to determine which independent variables predicted frequency of use of body-worn cameras. The demographic variables, gender and years of service, were entered first and evaluated. In the second step, perceived ease of use, perceived usefulness, and attitude toward body-worn cameras were entered. Descriptive statistics and results of the Pearson product moment correlation and hierarchical regression procedures were used to describe and interpret the results of the statistical tests. In addition, because multiple regression is based on the statistical assumptions of linearity, normality distributed errors, and homoscedasticity (constant error variance), scatterplots of the regression standardized residual values and the regression standardized predicted variables were evaluated in order to assess the tenability of the statistical assumptions (Mertler & Vannatta, 2013).

Threats to Validity

The highest threat to validity is instrumentation (Babbie, 2010). In this study, validity refers to the ability of the instrument used in the survey to quantify its intended measurement accurately (Nachmias, 2015). Therefore, validity in this study refers to the accuracy of Davis's 10-item, 7-point Likert scale, which measured perceived ease of use and perceived usefulness, and 7-point semantic differential rating scales used to measure attitude. Several researchers who employed TAM found it to be valid and dependable in predicting and understanding information usage by individuals (Godoe & Johansen, 2012; Lee et al., 2013). With the wide acceptance of this instrument among technology researchers, I do not foresee any threat to validity with the instrument in this study. I am confident that the instrument will be able to measure accurately the perceived ease of use, perceived usefulness, and attitude of officers in the southern county sheriff's office toward the body-worn camera technology.

Ethical Procedures

In agreement with Walden University's guidelines for ethical protections in the treatment of human participants, I followed the procedures set forth by their institutional review board (IRB). The approval number is 05-30-17-0266372 (see Appendix G). I completed the National Institute of Health training (see Appendix E). During the consent process, I advised all participants of their right to withdraw from participation at any time without negative consequences (see Appendix A). To ensure the participants' confidentiality, I informed them not to write their name or any other identifier on the paper questionnaire (see Appendix D). I ensured that participants were fully aware of the

purpose of the study, by including the information during the consent process. It was also ethically prudent that I provided participants the means to inquire about the intent of the study. Therefore, I provided a number and e-mail address for such inquiries. I obtained a letter of cooperation from the southern county's sheriff's department (See Appendix F). I did not begin collecting participant data until I had approval from Walden University's board of institutional review.

Assumptions and Limitations

Assumptions associated with multiple regressions analysis include (a) the relationship between the independent and dependent variables is linear, (b) the error between observed and predicted values are normally distributed, (c) there is little or no multicollinearity in the data, and (d) there is little or no autocorrelation in the data (Uyanik & Guler, 2013). There are possible limitations from internal threats to validity. Omitted variable bias is a potential threat to internal validity in this study (Gast & Ledford 2014). The TAM measure (Davis et al., 1989) includes the combined perceived ease of use and perceived usefulness. Looking at the two measures independently might shed further light on the combined measure. Convenience sampling strategy used in this study is another limitation in that it did not allow the generalizability of results that random sampling from police officers in multiple jurisdictions might have permitted (Bernard, 2013). This limitation is reflected and discussed in the findings of the study.

Summary

The purpose of this quantitative study was to investigate how a sample of sworn permanent law enforcement officers in a southern county sheriff's department perceive

and accept body-worn camera. In Chapter 3, I presented an overview of the hypothesis, data collection, population under analysis, processes relating to recruitment, and sampling procedures. In addition, I examined potential threats to internal and external validity. Finally, I discussed measures taken to prevent ethical conflicts and safeguard the confidentiality of the participants. I conducted the study following the guidelines set forth by the Walden University Institutional Review Board to ensure the protection of the participants' confidentiality. The results of the data collected using these procedures are presented in Chapter 4.

Chapter 4: Results

The purpose of this cross-sectional, quantitative study was to investigate how a convenience sample of law enforcement officers in a large southern county sheriff's office perceived, accepted, and used body-worn camera technology and to identify possible factors involved in the acceptance. I used the TAM to understand police officers' acceptance of the body-worn camera technology. The independent (or predictor) variables were police officers' acceptance of body-worn cameras, as measured by (a) officers' perceived ease of use and (b) perceived usefulness, and (c) officers' attitudes toward body-worn cameras, and the officers' (d) gender and (e) years of service. The police officers' self-reported frequency of use of the camera was the dependent variable. The questionnaire was distributed to in-service trainees at the beginning of two training weeks. Approximately 60 officers were in each of those training sessions (N = 120).

Description of the Sample

I distributed 120 questionnaires at the training center. 88 were retuned completed and four returned only partial data. 28 officers did not return their survey. Data from 88 completed surveys were used to analyze the research questions, resulting in a response rate of 73.3%. More than half (53%) of the participants were female and a majority (57%) of the officers had served between 3 and 10 years (see Table 1). Approximately a quarter of the respondents (24%) had 2 or fewer years of service with the department. Two thirds of the respondents reported using their body-worn cameras more than once a week. One third of the officers reported using the technology at least once a day.

Table 1

Description of the Sample

Characteristic	*n*	%
Gender		
Female	47	53.4
Male	41	46.6
Years of service		
2 or fewer	21	23.9
3 to 5	34	38.6
6 to 10	16	18.2
11 to 20	10	11.4
21 or more	7	8.0
Frequency of use		
Do not use at all	4	4.5
Use less than once each week	11	12.5
Use about once each week	15	17.0
Use several times each week	29	33.0
Use about once each day	17	19.3
Use several times each day	12	13.6

Participants' Responses to Questionnaire Items

Tables 2, 3, and 4 contain the participants' responses to items on the three scales. The responses ranged from 1 (*strongly disagree*) to 7 (*strongly agree*). For descriptive purposes, the disagree ratings (1, 2, and 3) were collapsed into a category called *disagree* and the agree ratings (5, 6, and 7) were collapsed into a category called *agree*. The neutral rating (4) remained a separate category.

Ease of Use of the Body-Worn Camera

Three fourths or more of the respondents (see Table 2) indicated that learning to operate the body-worn camera is easy (75%), interaction with the body-worn camera is clear and understandable (88%), and overall it is easy to use (85%). The respondents *disagreed* that the body-worn cameras are cumbersome to use (70%), frustrating to interact with (81%), or require a lot of mental effort (80%). However, a third of the

officers either *agreed* or was *neutral* that the body-worn camera is cumbersome to use (30%) and it is rigid and inflexible to interact with (34%). A third of the officers *disagreed* or was *neutral* that the body-worn camera was easy to get to do what the officer wants it to do (31%) or that it was easy to remember how to perform tasks (33%).

Table 2

Responses to Items in Ease of Use Scale

	Percent of responses		
Item	Disagree	Neutral	Agree
1. I find body-worn cameras cumbersome to use.	70.4	12.5	17.1
2. Learning to operate the body-worn camera is easy for me.	3.3	11.4	75.0
3. Interacting with the body-worn camera is often frustrating.	80.6	8.0	11.4
4. I find it easy to get the body-worn camera to do what I want it to do.	13.6	17.0	69.4
5. The body-worn camera is rigid and inflexible to interact with.	65.9	15.9	18.2
6. It is easy for me to remember how to perform tasks using the body-worn camera.	9.1	23.9	67.0
7. Interacting with the body-worn camera requires a lot of mental effort.	79.5	13.6	6.8
8. My interaction with the body-worn camera is clear and understandable.	3.3	9.1	87.6
9. I find it takes a lot of effort to become skillful at using body-worn camera.	80.6	8.0	11.4
10. Overall, I find the body-worn camera easy to use.	4.6	10.2	85.2

Usefulness of the Body-Worn Camera

More than 70% of the respondents (see Table 3) indicated that using body-worn cameras improves the quality of their work (74%), supports critical aspects of their jobs (84%), and are useful in their jobs (82%). Less than two thirds of the officers indicated that using the body-worn camera gives them greater control over their work (63%), enhances their effectiveness on the job (59%), or makes it easier to do their jobs (55%). In addition, many officers either *disagreed* or were *neutral* that the body-worn camera

enables them to accomplish tasks more quickly (59%), increases their productivity (69%), improves their job performance (52%), or allows them to accomplish more work than would otherwise be possible (66%).

Table 3

Responses to Items in Usefulness Scale

	Percent of responses		
Item	Disagree	Neutral	Agree
1. Using body-worn camera improves the quality of the work I do.	8.0	18.2	73.8
2. Using body-worn camera gives me greater control over my work.	14.8	22.7	62.5
3. Body-worn camera enables me to accomplish tasks more quickly.	18.2	40.9	29.5
4. Body-worn camera supports critical aspects of my job.	4.5	10.2	84.2
5. Using body-worn camera increases my productivity.	20.5	48.9	30.7
6. Using body-worn camera improves my job performance.	27.3	25.0	47.7
7. Using body-worn camera allows me to accomplish more work than would otherwise be possible.	31.8	34.1	32.9
8. Using body-worn camera enhances my effectiveness on the job.	17.1	23.9	59.1
9. Using body-worn camera makes it easier to do my job.	21.6	23.9	54.5
10. Overall, I find the body-worn camera system useful in my job.	4.6	13.6	81.8

Attitude

Although the officers had reservations about some of the specific items in the previous scales, their attitude toward the use of body-worn cameras was positive (see Table 4). More than 90% of the respondents indicated that use of the cameras was good (91%), wise (94%), and beneficial (94%). At least 80% of the officers surveyed indicated that the use of body-worn cameras was positive (86%) and favorable (82%).

Table 4

Responses to Items in Attitude Scale

Item	Percent of responses		
	Disagree	Neutral	Agree
Good/Bad	0.0.	9.1	90.9
Wise/Foolish	0.0	5.7	94.3
Favorable/Unfavorable	3.4	14.8	81.8
Beneficial/Harmful	0.0	5.7	94.3
Positive/Negative	0.0	13.6	86.4

Questionnaire Scales

The questionnaire contained items that the participants used to rate their perceived ease of use, perceived usefulness, and attitude toward use of the body-worn camera. Scale scores were created by calculating the mean of the completed items in each scale. Two of the scale scores (perceived ease of use and perceived usefulness) ranged from 1 (*strongly disagree*) to 7 (*strongly agree*). An attitude score was created by calculating the mean of five differential rating scales. The attitude score ranged from 1 (*poor attitude*) to 7 (*good attitude*). The reliability of the three scales was measured using Cronbach's alpha coefficient (see Table 5). The alpha coefficients for the three scales ranged from .80 to .92; thus, the scales are reliable (Tavakol & Dennick, 2011).

Table 6 contains the descriptive statistics of the scales. On a scale of 1 (*low agreement or attitude*) to 7 (*high agreement or attitude*), the average ease of use was positive (M = 5.58). The average usefulness score was *neutral* to *slightly agree* (M = 4.80), while the attitude about body-worn cameras was *good* (M = 6.25).

Table 5

Reliability of the Scales

Scale	Items in scale	Cronbach's alpha coefficient
Ease of use	10	.80
Usefulness	10	.92
Attitude	5	.91

Table 6

Ranges, Means, and Standard Deviations of Scale Scores

Scale	*Minimum*	*Maximum*	*M*	*SD*
Ease of use	3.70	7.00	5.58	0.91
Usefulness	1.60	7.00	4.80	1.22
Attitude	4.00	7.00	6.25	0.88

Analyses of the Data

The data were checked to determine if the participants' responses met the assumptions of regression. Because multiple linear regression is based on the statistical assumptions of linearity, normality distributed errors, and homoscedasticity (constant error variance), scatterplots of the regression standardized residual values and the regression standardized predicted variables were evaluated in order to assess the tenability of the statistical assumptions (Mertler & Vannatta, 2013).

By testing the data for assumptions, the validity of the data was verified. Independent variables were officers' perceived ease of use and usefulness of the body-worn cameras, the officers' attitudes toward the cameras, and their gender and years of service. The dependent variable was frequency of use of the body-worn camera. The dependent variable was examined to determine if heteroscedasticity and multicollinearity

were present, the relationships between the independent and dependent variables were linear, and that the residuals of the dependent variable were normally distributed. SPSS multiple regression syntax was used to test these assumptions.

The Durbin-Watson statistic is used to detect homoscedasticity. Values above 1 indicate that the residuals are independent (Tabachnick & Fidell, 2012). The value obtained in the multiple regression analysis was 1.89. To determine if independent variables were not highly correlated, the variance inflation factors (VIFs) should be lower than 10 (Meyers, 1990). The VIFs ranged from 1.014–1.577 in the study's dataset.

Outliers are measured using Mahalanobis distance; cases with χ^2 values greater than 20.515 (for five independent variables evaluated at $p < .001$) indicate outliers (Tabachnick & Fidell, 2012). However, the maximum values in the dataset were 16.094, indicating no outliers. Cook's distance suggests how much the regression coefficients would change if a particular case is removed; values greater than 1 should be examined because they may be too influential (Tabachnick & Fidell, 2012). All Cook's distance values were less than 1 (range from .000 – .129). Scatterplots, normal probability plots of regression standardized residuals, and partial regression plots were examined. Based on those analyses, the 88 cases met the assumptions of regression analysis.

Research Question 1

The first research question was designed to determine the relationship between the five independent variables. I conducted Pearson product moment correlations to determine the relationship among the independent variables (ease and usefulness of body-worn, attitude toward the camera, and gender and years of service).

Weak to moderate statistically significant relationships were found between ease of use and usefulness (r = .37), ease of use and attitude (r = .40), usefulness and attitude (r = .50), and between usefulness and years of service (r = -.28). Three of the statistically significant relationships were positive, indicating that as the officers' perceptions of the ease of use of body-worn cameras increased, so did their perception of their usefulness and their attitude toward the camera increase. The relationship between usefulness and years of service was negative, indicating that as officers' length of service increased, their perceptions of body-worn cameras decreased. Gender was not found to be significantly correlated to the other independent variables. With the exception of perceived usefulness, years of service was also not significantly related to the remaining independent variables. However, because several of the independent variables were significantly related to each other, the null hypothesis for Research Question 1 was rejected and the alternative hypothesis was accepted.

Table 7

Correlations of Variables of Interest

Variable	Usefulness	Attitude	Gender	Years of service
Ease of use	.37*	.40*	-.01	.09
Usefulness		.50*	-.05	-.28*
Attitude			.05	-.06
Gender				.12

* $p < .01$

Research Questions 2–5

Research Questions 2 through 5 were designed to test if a number of independent variables were predictors of the officers' frequency of use of body-worn cameras. A hierarchical approach to the analysis was taken, first asking if the officers' gender and length of service were predictors of their frequency of use of the cameras. Research Questions 3, 4, and 5 were designed to determine if, after the contribution of the demographic variables was calculated, the officers' perceived ease and usefulness of the cameras and their attitude toward the cameras were predictors of their frequency of use of the cameras.

Table 8 contains the results of the analysis. Officers' gender and length of service were entered into the hierarchical regression procedure first (Model 1). A significant regression equation was not created ($F = .46$, $p = .64$) and neither gender nor years of service were significant predictors of frequency of use of the body-worn cameras. Therefore, the null hypothesis for Research Question 2 was not rejected. Police officers' demographics (gender and years of service) are not predictors of their frequency of use of the body-worn cameras as a component of their regular uniform.

In the second model, ease of use, usefulness, and attitude toward the cameras was entered into the hierarchical regression procedure. The resulting equation was significant ($F = 5.61$, $p < .01$) and one independent variable (officers' attitudes) was a significant predictor. Officers' attitudes toward the body-worn cameras explained 26% of the variance ($R^2 = .255$) of frequency of use. The positive unstandardized regression coefficient for officers' attitudes toward body-worn cameras indicates an increase in the

officers' frequency of use of the body-worn cameras. Therefore, officers with more positive attitudes toward the cameras are more likely to indicate more use of the body-worn cameras than do officers with less positive attitudes.

Table 8

Predictors of Officers' Frequency of Use of Body-Worn Cameras

Predictor variables	B	SE	β	*t*	*p*	Adjusted R^2
Model 1 (demographics only)						
(Constant)	3.976	.342		11.61	< .01	
Gender	.237	.293	.088	.81	.42	
Years of service	-.073	.123	-.065	-.60	.55	.013
Model 2 (scales added)						
(Constant)	-1.299	1.066		-1.22	.23	
Gender	.185	.260	.068	.71	.78	
Years of service	-.058	.116	-.051	-.50	.62	
Ease of use	.266	.161	.179	1.62	.10	
Usefulness	.022	.133	.019	.16	.87	
Attitude	.588	.176	.384	3.34	< .01	.209

Officers' perceived ease and usefulness of the body-worn cameras were not significant predictors of the officers' frequency of use. Therefore, the null hypotheses for Research Questions 4 and 5 were not rejected. However, officers' attitude toward the cameras was a significant predictor of frequency of use. Therefore, the null hypothesis for Research Question 3 was rejected and the alternative hypothesis was accepted. Police officers' attitude toward using body-worn cameras is a predictor of their reported frequency of use of the body-worn cameras as a component of their regular uniform.

Summary

Completed questionnaires were received from 88 officers. On a scale of 1 (*low agreement or attitude*) to 7 (*high agreement or attitude*), the average ease of use was

positive. The average usefulness score was neutral to slightly agree, while the attitude about body-worn cameras was good. The officers' perceptions of the ease of use of body-worn cameras were moderately and positively correlated with their perceptions of the cameras' usefulness and their attitudes toward the camera. The relationship between usefulness and years of service was negative, indicating that as officers' length of service increased, their perceptions of body-worn cameras decreased. Gender was not found to be significantly correlated to the other independent variables.

Officers' gender and length of service were not predictors of the police officers' frequency of use of the cameras. However, the officers' attitude toward using body-worn cameras was a predictor of their reported frequency of use of the body-worn cameras as a component of their regular uniform. Chapter 5 contains a discussion of these results and the conclusions drawn from the findings. Implications for practice and recommendations for future research are also presented.

Chapter 5: Discussion, Conclusions, Implications, and Recommendations

Introduction

Politicians, civil societies, and victims' families have called for law enforcement agencies to equip local officers with body-worn cameras to increase transparency and accountability. This came as a result of a worsening relationship between law enforcement officers and the community they serve due to high profiled incidents involving the use of force. The purpose of the current study was to use quantitative methods of investigation to understand how law enforcement officers in a large size southern county sheriff's office in the southern United States perceive, accept, and use body-worn camera technology and to identify possible additional factors that were involved in the acceptance. The primary objective was to contribute new information to assist policymakers in developing and implementing policies, which respond to the needs, resources, and the legal requirements of their agencies through understanding the relationship between how the primary users of the technology perceive its use and if that perception is important for utilization rates. Documenting this relationship and additional related factors could contribute to broader acceptance by officers in the future.

Key findings from the analysis of data collected from 88 officers found that (a) officers' perceptions of the ease of use of body-worn cameras were moderately and positively correlated with their perceptions of the cameras' usefulness and their attitudes toward the camera; (b) the relationship between usefulness and years of service was negative, indicating that as officers' length of service increased, their perceptions of body-worn cameras usefulness decreased; (c) gender was not found to be significantly

correlated to the other independent variables; and (d) officers' attitudes toward using body-worn cameras are a predictor of their reported frequency of use of the body-worn cameras as a component of their regular uniform.

Interpretation of the Findings

The findings from this study are discussed in this section. I present descriptive statistics and results of the Pearson product moment correlation and hierarchical regression procedures used to describe and interpret the results of the statistical tests. I then examine the relationship among the independent variables (ease and usefulness of body-worn, attitude toward the camera, and gender and years of service).

Ease of Use of the Body-Worn Camera

In this study, the officers indicated that operating the camera is easy, interaction is clear and understandable, and overall it is easy to use. This finding is in agreement with other research conducted using TAM. According to the TAM, police acceptance of the new technology involves two central determinants: perceived ease of use and perceived usefulness (Davis et al., 1989; Godoe, & Johansen, 2012). These are the basic concept of TAM, "the more a user perceives a technology to be useful, the more the user believes it is easy to use, and the more the user intends to use the technology" (Zhang & Xu, 2011, p. 202). In other words, determining an individual's behavioral intention to use a new technology rests on these two beliefs, perceived ease of use, and perceived usefulness (Gardner & Amoroso, 2004; Vankatesh & Davis, 2000).

Usefulness of the Body-Worn Camera

Officers agreed on the usefulness of the body-worn camera. Participants indicated that using body-worn cameras improves the quality of their work, supports critical aspects of their jobs, and are useful in their jobs. However, many officers either *disagreed* or were *neutral* that the body-worn camera enables them to accomplish tasks more quickly, increases their productivity, improves their job performance, or allows them to accomplish more work than would otherwise be possible. This is in contradiction to other researchers' findings using TAM instrument. Prospective user's subjective probability that using technology will increase his or her job performance within an organizational context is an important determinant of acceptability of the technology (Venkatesh & David, 2000). The contradiction could have been as a result of instrument error. Instruments that work for technology, such as *WriteOne* word processor or *Electronic-mail,* might not completely work for other technologies such as the body-worn camera.

Attitude, Officers' Gender, and Officers' Years of Service

Overall, the officers' attitude toward the body-warn camera was positive, despite their reservations about some of the specific items in the previous scales. Respondents indicated that use of the cameras was good, wise, beneficial, positive, and favorable. However, those attitudes were moderated by officers' years of experience. This finding confirms the results and concerns from other researchers. For example, there were questions about individual differences in officers' acceptance of the camera in relationship to their roles and previous experiences. For instance, while younger officers

who are technological savvy may find the new technology as essential equipment in their arsenal, senior officers, or those officers who are less savvy with the technology may view technology as a hindrance (Davis et al., 1989; Mateescu et al., 2015).

Officers with more positive attitudes toward the cameras are more likely to accept the body-worn cameras than do officers with less positive attitudes. While officers who support the body-worn cameras will help facilitate the implementations and use of the new technology, those who oppose body-worn cameras may try to undermine the acquisition and acceptance of the technology by their agencies (Jennings et al., 2014).

Gender was not found to be significantly correlated to the other independent variables**,** and has no contributing factor towards officers' acceptance of the body-worn camera or its frequency of use. Therefore, officers' gender and length of service were not predictors of the police officers' frequency of use of the cameras.

Limitations of the Study

There are possible limitations from internal threats to validity. Omitted variable bias is a potential threat to internal validity in this study (Gast & Ledford 2014). The TAM measure (Davis et al., 1989) includes the combined perceived ease of use and perceived usefulness. Convenience sampling strategy used in this study is another limitation in that it did not allow the generalizability of results that random sampling from police officers in multiple jurisdictions might have permitted (Bernard, 2013). The study population was limited to officers at the training center from September 4 through September 15 2017. These were the two 1-week sessions when the survey was conducted.

Recommendations

The officers' attitude toward the body-warn camera was generally positive, despite some reservations about some of the specific items in the previous scales. However, those attitudes were moderated by officers' years of experience. The relationship between usefulness and years of service was negative, indicating that as officers' length of service increased, their perceptions of body-worn cameras usefulness decreased. The findings of this study point to a number of recommendations for law enforcement officials, future researchers, and policy makers alike. The primary challenge is the need for consistency in the acceptance of the body-worn camera by all officers. Law enforcement administrations should focus on changing the attitudes of officers with more experience who are older, set in their ways, and not technically savvy. Those who oppose the body-worn camera may try to undermine acceptance and use of this new technology by their various agencies (Jennings et al., 2014).

I selected the TAM instrument for this study because of its well-documented acceptance as one of the most commonly used models for understanding and predicting the usage and acceptance of information technology by individuals (Godoe & Johansen, 2012). Using the TAM supports explaining the relationship between a new technology user and internal psychological variables such as attitudes, beliefs, and behavioral intentions (Davis et al., 1989; Godoe, & Johansen, 2012). The two central determinants in the TAM are (a) perceived ease of use and (b) perceived usefulness. Together these determinants form a measure of construct that is, for purposes of this current study, called acceptance of the technology.

The result of the data analysis from this study indicated that officers' perceived ease and usefulness of the body-worn cameras were not significant predictors of the officers' frequency of use. This could indicate that the original TAM instrument should be modified to suit a specific electronic device in question other than its original focus, electronic mail. Another recommendation for future research would be the population and data collection time frame. As found herein, the population was limited to only sworn officers of a southern county sheriff's office that were participants in an in-service training. Data collection lasted only two weeks, from September 4 through September 15, 2017. Different methodology that will allow for generalization should be attempted in future studies.

Implications for Social Change

Although the purpose of the current study was to use quantitative methods of investigation to understand how law enforcement officers in a large size southern county sheriff's office in the Southern United States perceive, accept, and use body-worn camera technology and to identify possible additional factors that are involved in the acceptance, the primary objective was to contribute new information to assist policymakers in developing and implementing policies. Policies which will respond to the needs, resources, and the legal requirements of the agencies through understanding the relationship between how the primary users of the technology perceive its use and if that perception is important for utilization rates. Findings from this study have provided insight into how southern county sheriff officers perceive and accept body-worn cameras as a component of their regular uniform.

Despite reservations about some specific items in the previous scales, the officers' attitude toward the body-warn camera was positive. But those attitudes were moderated by officers' years of experience. The primary challenge is the need to convince experienced officers that the benefits may include improving agency transparency while providing evidence documentation for investigations and prosecutions. With the result of the analysis, more attention should be focused on the outcomes to address the technology gap between older officers who might be less savvy in technology, and the younger officers who are more likely to accept the new technology through training. The results of this study ultimately have the potential of educating law enforcement leadership, giving them the newly acquired knowledge to craft policies for positive social change, by developing better training for the officers, especially the more experience officers on the importance of the body-worn cameras. Therefore, better training for officers, subsequent acceptance, and proper use of body-worn cameras could be a deterrent against aggressive community policing. Deterrence is a mechanism used to convince an antagonistic adversary to refrain from his or her aggressive action (Taquechel & Lewis, 2012).

Police-community relations might improve when both officers and the community are self-aware. Self-awareness theory reflected the idea that when people pay attention to themselves through introspection or other ways similar to camera recordings, they judge themselves based on their values (Farra, 2014). In addition, when people are self-aware, they tend to exhibit conscious acts instead of passive reactions. When people are aware of being surveilled, the fear of capture while involved in criminal activity will contribute to

them displaying good behavior (Silvia & Duval, 2001). These include both the police and the community they serve.

Further, as suggested by Miller and Toliver (2014), there are potential benefits of improving relationships between law enforcement officers and the public with the application of the body-worn camera technology. These benefits include rebuilding trust between police and their communities where trust has been damaged, improving agency transparency, and increasing police accountability.

Conclusion

There has been enormous scrutiny of police-community relations in the past several years, based on several high-profile incidents involving the use of deadly force. Politicians, civil societies, and victims' families have called for law enforcement agencies to equip local officers with body-worn cameras to increase transparency and accountability (Abdollah, 2014). The sudden rush to equip police officers with this new technology left some questions and concerns about privacy issues, lack of adequate knowledge regarding the body-worn camera, and the officers' perceptions and acceptance of the technology (Miller & Toliver, 2014). Thus, the current study set out to understand how law enforcement officers in a large size southern county sheriff's office in the Southern United States perceive, accept, and use body-worn camera technology and to identify possible additional factors that were involved in the acceptance.

Some findings from the investigation into five independent variables aligned with previous research with TAM. The officers' perceptions of the ease of use of body-worn cameras were moderately and positively correlated with their perceptions of the cameras'

usefulness and their attitudes toward the camera. The relationship between usefulness and years of service was negative, indicating that as officers' length of service increased, their perceptions of body-worn cameras decreased. Gender was not found to be significantly correlated to the other independent variables. Officers' gender and length of service were not predictors of the police officers' frequency of use of the cameras. However, the officers' attitude toward using body-worn cameras was a predictor of their reported frequency of use of the body-worn cameras as a component of their regular uniform.

References

Abdollah, T. (2014). Officers fear body cameras raise privacy concerns: The lack of clear guidance on the cameras' use could potentially undermine departments' goals of creating greater accountability of officers. *Policeone.com News.* Retrieved from http://www.policeone.com

Aberson, C. L. (2010). *Applied power analysis for the behavioral science*. New York, NY: Routledge.

Acharya, A. S., Prakash, A., Saxena, P., & Nigam, A. (2013). Sampling: Why and how of it? *Indian Journal of Medical Specialties*, *4*(2), 330-333. doi:10.7713/ijms.2013.0032

Adler, J. S. (2012). The killer behind the badge: Race and police homicide in New Orleans. *Law and History Review, 30*(2), 495-531. doi:10.1017/S0738248011000927

Aguinis, H., Gottfredson, R. K., & Joo, H. (2013). Best-practice recommendations for defining, identifying, and handling outliers. *Organizational Research Methods, 16*(2), 270-301. doi:10.1177/1094428112470848

Ajani, T., & Stork, E. (2013). Creating a semantic differential scale for measuring user's perceptions and attitudes toward emerging technologies. *EDSIG (Education Special Interest Group of the AITP)* retrieved from www.aitp-edsig.org.

Ajzen, I., & Fishbein, M. (1975). *Belief, attitude, intention, and behavior: An introduction to theory and research*. Reading, MA: Addison-Wesley.

Alexopoulos, E. C. (2010). Introduction to multivariate regression analysis. *Hippokratia,*

14(1), 23-28. Retrieved from http://www.hippokratia.gr/

American Psychological Association. (n.d.). *Ethical principles of psychologists and code of conduct.* Retrieved on October 11, 2012, from http://www.apa.org/ethics/code/index.aspx?

Andersen, R. S., & Moller, F. (2013). Engaging the limits of visibility: Photography, security, and surveillance. *Security Dialogue, 44*(3), 203-221. doi:10.1177/0967010613484955.

Apel, R. (2013). Sanctions, perceptions, and crime: Implications for criminal deterrence. *Journal of Quantitative Criminology, 29*(1), 67-101. doi.10.1007/s10940-012-9170-1

Ariel, B. (2016). Do police body cameras really work? Sometimes police body cameras accomplish their intended purpose, but other times they backfire. And nobody knows why. Retrieved from http://spectrum.ieee.org/consumer-electronics/portable-device

Ariel, B., Farrar, W. A., & Sutherland, A. (2015). The effect of police body-worn cameras on the use of force and citizens' complaints against the police: A randomized controlled trial. *Journal of Quantitative Criminology, 31*(3), 509-535. doi:10.1007/510940-014-9236-3.

Babbie, E. R. (1990). *Survey research methods* (2nd ed.). Belmont, CA: Wadsworth.

Babbie, E. R. (2010). *The practice of social research* (12th ed.). Belmont, CA: Wadsworth.

Babbie, E. R., & Rubin, A. (2017). *Research Methods for Social Work* (9th ed.). Boston,

MA: Cengage.

Balko, R. (2014, August 19). Police cameras are important, but they're useless without policies to ensure they're used properly. *Washington Post.* Retrieved from https://www.washingtonpost.com/news/the-watch/wp/2014/08/19/police-cameras-are-important-but-theyre-useless-without-proper-policies-to-ensure-theyre-used-properly/?utm_term=.5cb4288e016c

Barends, E., Janssen, B., ten Have, W., & ten Have, S. (2013). Difficult but doable: Increasing the internal validity of organizational change management studies. *Journal of Applied Behavioral Science, 50*(1), 50-54. doi:10.1177/0021886313515614

Barnard-Wills, D., & Wells, H. (2012). Surveillance, technology, and the everyday. C*riminology & Criminal Justice, 12*(3), 227-237. doi:10.1177/1748895812446644.

Baron, S., Patterson, A., & Harris, K. (2006). Beyond technology acceptance: Understanding consumer practice. *International Journal of Service Industry Management, 17*(2), 111-135. doi:10.1108/09564230610656962.

Berg, M. T. (2014). Accounting for racial disparities in the nature of violent victimization. *Journal of Quantitative Criminology, 30*(4), 629-650. doi:10.1007/s10940-014-9217-6

Bernard, H. R. (2013). *Social research methods: Qualitative and quantitative approaches* (2nd ed.). Thousand Oaks, CA: Sage.

Bhattacherjee, A. (2012). *Social science research: Principles, methods, and practices.*

Tampa, FL: University of South Florida, Retrieved from http://scholarcommons.usf.edu/cgi/viewcontent.cgi?article=1002&context=oa_textbooks

Boivin, R., & Lagacé, M. (2016). Police use-of-force situations in Canada: Analyzing the force or resistance ratio using a trichotomous dependent variable *Police Quarterly, 19*(2). 180-198. doi:10.1177/1098611115613953.

Bolger, P. C. (2015). Just following orders: A meta-analysis of the correlates of American police officer use of force decisions. *American Journal of Criminal Justice, 40*(3), 466-492. doi:10.1007/s12103-014-9278-y

Bowden, V. R. (2011). Demystifying the research process: Cross-sectional design. *Pediatric Nursing, 37*(3), 127-128. Retrieved from http://journals.lww.com/jnr-twna/pages/default.aspx

Brooks/Cole.Bernard, H. R. (2002). *Research methods in anthropology: Qualitative and quantitative methods,* (*3rd ed*.). Walnut Creek, CA: AltaMira Press

Brown, M. M. (2015). Revisiting the IT productivity paradox. *American Review of Public Administration, 45*(5), 565-583. doi:10.1177/0275074014523102.

Brunson, R. K. (2007). “Police don’t like black people": African-American young men’s accumulated police experiences. *Criminology & Public Policy, 6*(1), 71. doi.10.1111/j.1745-9133.2007.00423.x

Bud, T. K. (2016). The rise and risks of police body-worn cameras in Canada. *Surveillance & Society, 14*(1), 117-121. Retrieved from http://www.surveillance-and-society.org/

Carson, J. V. (2014). Counterterrorism and radical eco-groups: A context for exploring the series hazard model. *Journal of Quantitative Criminology, 30*(3), 485-504. doi.10.1007/s10940-013-9211-4

Cohen, J. (1969). *Statistical power analysis for the behavioral sciences.* New York, NY: Academic Press.

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Mahwah, NJ: Lawrence Erlbaum.

Cohen, J. (1992). A power primer. *Psychological Bulletin, 122*(1), 155–159. doi:10.1037/0033-2909.112.1.155

Cohen, J. (1992b). Statistical power analysis. *Current Directions in Psychological Science, 1*(3), 98-101. doi:10.1111/1467-8721.ep10768783

Cohen, J., & Cohen, P. (1975). *Applied multiple regression/correlation analysis for the behavioral sciences.* Hillsdale, NJ: Lawrence Erlbaum.

Cohen, J., Cohen P., West, S. G., & Aiken, L. S. (2003). *Applied multiple regression/correlation analysis for the behavioral sciences.* (3rd ed.) Hillsdale, NJ: Lawrence Erlbaum Associates.

Cohen, J., Cohen P., West, S. G., & Aiken, L. S. (2013). *Applied multiple regression/correlation analysis for the behavioral sciences.* (3rd ed.) London, England: Routledge.

College of Policing (n.d.). *Armed Policing*. Retrieved from https://www.app.college.police.uk/app-content/armed-policing/.

Cooper, D. R., & Schindler, P. S. (2011). *Business research methods* (11th ed.). New

York, NY: McGraw-Hill.

Daly, W. (2015). The "what if" of body cameras. *American Jails, 29*(1), 68-69. Retrieved from http://www.americanjail.org/

Daniel, J. (2012). Choosing the type of probability sampling. *In Sampling essentials: Practical guideline for making sampling choices.* (pp. 125-175). Thousand Oaks, CA: SAGE Publications, Inc.

Davis, F. D., Baggozi, R. P., & Warshaw, P. R. (1989). User acceptance of computer technology: A comparison of two theoretical models, *Management Science, 35*(8), 982-1003. doi.10.1287/mnsc.35.8.982

Delost, M. E., & Nadder, T. S. (2014). Guidelines for initiating a research agenda: Research design and dissemination of results. *Clinical Laboratory Science, 27*(4), 237-244. Retrieved from http://www.ascls.org

Dillman, D. A. (2000). *Mail and internet surveys: The tailored design method.* New York, NY: John Wiley & Sons, Inc.

Dillman, D. A., Phelps, G. Tortora, R., Swift, K., Kohrell, J., Berck, J. & Messer, B. L. (2009). Response rate and measurement differences in mixed-mode surveys using 149 mail, telephone, interactive voice response (IVR) and the Internet. *Social Science Research, 38,* 3-20. doi:10.1016/j.ssresearch.2008.03.007

Ellis, P. D. (2010). *The essential guide to effect sizes: Statistical power, meta-analysis, and the interpretation of research results.* Cambridge, MA: Cambridge University Press.

Emery, R. D., Leo, R. A., Fyfe, J. J., Hobson, P. (1998). Cameras in the station house:

Responses to Emery. *Criminal Justice Ethics, 17*(1), 43-49. doi.10.1080/0731129x.1998.9992047

Etikan, I., Musa, S. A., & Alkassim, R. S. (2016). Comparison of convenience sampling and purposive sampling. *American Journal of Theoretical and Applied Statistics,* 5(1), 1-4. doi:10.11648/j.ajtas.20160501.11

Evans, J. D. (1996). *Straightforward statistics for the behavioral sciences*. Pacific Grove, CA: Brooks/Cole.

Fabian, J. (2015, November 1). Obama, FBI Director spar over the Ferguson effect on police. *The Hill.* Retrieved from http://www.thehill.com/news/administration

Farrar, W. (2014). Operation candid camera: Rialto police department's body-worn camera experiment. *Police Chief Magazine.* Retrieved from http://www.policechiefmagazine.org/

Federal Bureau of Investigation (2014). Law enforcement officers killed and assaulted. *FBI Uniform Crime Report.* Retrieved from http://ucr.fbi.gov/leoka.officersfeloniusly-killed

Feeney, N. (2014, December 1). Obama requests funds for police body cameras to address simmering distrust after Ferguson. *Time*. Retrieved from http://time.com/3613058/obama-ferguson-police-body-cameras-funding/.

Fishbein, M. (1979). *A theory of reasoned action: Some applications and implications.* Nebraska Symposium on Motivation, *27,* 65-116. Retrieved from http://psycnet.apa.org/psycinfo/1982-21121-001

Fiumara, J. (2012). The future is near: Getting ahead of the challenges of body-worn

video, Technology talk. *The Police Chief, 79*(54), 1-4. Retrieved from http://www.policechiefmagazine.org/magazine/index.cfm?

Fouche, A. (2014, October). Officer attitude on deployment of body-worn cameras in the University of Georgia Police Department patrol division. *Campus Law Enforcement Journal, 44*(*3*), 21-28. Retrieved from http://community.iaclea.org/communities/community-home/librarydocuments/

Fowler, F. J. (2014). *Survey research methods* (5th ed.). Thousand Oaks, CA: Sage.

Frankford-Nachmias, C. F., & Nachmias, D. (2008). *Research methods in the social sciences* (7th ed.). New York, NY: Worth Publishers.

Fulton County Sheriff's Office (2015). *2015 Annual report.* Retrieved from http://www.fultonsheriff.org/files/117019452.pdf

Garrison, R. (2015). Body-worn cameras, the future is now. *Law & Order, 63*(2), 34-36. Retrieved from http://www.hendonpub.com/law_and_order

Gast, D.L, & Ledford, J.R. (2014) *Single case research methodology: Applications in special education and behavioral sciences*, Routledge, NY: NY

Gibbs, J. C., & Ahlin, E. M. (2013). The relationship between fairness and police-citizen hostility. *Journal of the Institute of Justice and International Studies, 13*(D1-VIII), Retrieved from https://www.ucmo.edu/cjinst/.

Gillis, W. (2014, September 22). Toronto police to wear body cameras in test project. *The Star*. Retrieved from http://www.thestar.com/news/crime/2014/09/22/toronto_police_to_wear_body_cameras_in_test_project.html.

Godoe, P., & Johansen, T. (2012). Understanding adoption of new technologies: Technology readiness and technology acceptance as an integrated concept. *Journal of European Psychology Students, 3*(1), 38-52. doi:10.5334/jeps.aq

Golafshani, N., (2003). Understanding reliability and validity in quantitative research. *The Qualitative Report, 8*(4). 597-607. Retrieved from http://tqr.nova.edu/

Goldman, A., & Gonzalez, J. (2015) Police brutality. *Democracy Now.* Retrieved from http://www.democracynow.org/topics/police_brutality/1

Gordon, A., & Wolf, R. (2007). License plate recognition technology: Innovation in law enforcement use. *FBI Law Enforcement Bulletin, 76*(3), 8-13. Retrieved from https://leb.fbi.gov/

Green, S, B., & Salkind, N. J. (2011). *Using SPSS for windows and Macintosh: Analyzing and understanding data. (*6th ed.) Upper Saddle River, NJ: Prentice Hall.

Hagan, F. E. (2013). *Research methods in criminal justice and criminology* (9th ed.). Upper Saddle River, NJ: Pearson Education, Inc.

Haggerty, K. D., Wilson, D., & Smith, G. J. D. (2011). Theorizing surveillance in crime control. *Theoretical Criminology, 15*(3), 231-237. doi:10.1177/1362480610396442.

Harvard Law Review (2015). *Considering police body cameras.* Cambridge, MA: Author

Haug, S., & Stockton, D. (2015). Reducing tensions between police & citizens. *Law & Order, 63*(10). 26-28,30. Retrieved from http://www.hendonpub.com/law_and_order

Hermann, P., & Weiner, R. (2014, December 2). Issues over police shooting in

Ferguson lead push for officers and body cameras. *Washington Post*. Retrieved from https://www.washingtonpost.com/local/crime/issues-over-police-shooting-in-ferguson-lead-push-for-officers-and-body-cameras

Hickman, M. J., Piquero, A. R., & Garner, J. H. (2008). Toward a national estimate of police use of non-lethal force. *Criminology and Public Policy, 7*(4), 563–604. doi:10.1111/j.1745-9133.2008.00528.x

Hickok, G. (2015). The interface theory of perception: The future of the science of the mind? *Psychonomic Bulletin & Review, 22*(6), 1477-1479. Retrieved from doi:10.3758/s13423-015-0930-4

Hinojosa, A. S., Walker, H. J. & Payne, G. T. (2015). Prerecruitment organizational perceptions and recruitment website information processing. *The International Journal of Human Resource Management, 26*(20), 2617-2631. doi:10.1080/09585192.2014.1003081

Hsu, J. C. (1988). Sample size computation for designing multiple comparison experiments. *Computational Statistics & Data Analysis, 7*(1), 79-91. doi:10.1016/0167-9473(88)90017-5

International Business Machines. (n.d.). *IBM SPSS Statistics v21.0*. Retrieved December 11, 2016, from http://www-01.ibm.com/software/analytics/spss/products/statistics/

Jackson, B. A. (2015). *Respect and legitimacy — a two-way street: Strengthening trust between police and the public in an era of increasing transparency*. Santa Monica, CA: RAND Corporation. Retrieved from

http://www.rand.org/pubs/perspectives/PE154.html.

Jackson, H. (2003). The ultimate sacrifice: Police officers killed in the line of duty. *Journal of California Law Enforcement, 37*(3), 1-11. Retrieved from https://cpoa.org/resources/journal-of-ca-law-enforcement/

Jennings, W. G., Fridell, L. A., & Lynch, M. D. (2014). Cops and cameras: Officer perceptions of the use of body-worn cameras in law enforcement. *Journal of Criminal Justice, 42*, 459-556. Retrieved from doi:10.1016/j.jcrimjus.2014.09.008

Jessen, R. J. (1978). *Statistical survey techniques.* New York, NY: John Wiley & Sons.

Kamalu, N. C. (2016). African Americans and racial profiling by U.S law enforcement: An analysis of police traffic stops and searches of motorists in Nebraska, 2002 – 2007. *African Journal of Criminology and Justice Studies, 9*(1), 187-206. Retrieved from https://www.umes.edu/ajcjs/default.aspx?id=148

Kelly, K., & Preacher, K. J. (2012). On effect size. *Psychological Methods, 17*(2), 137-152. doi:10.1037/a0028086

Kimberlin, C.L., & Winterstein, A.G. (2008). Validity and reliability of measurement instruments used in research: *American Society of Health-System Pharmacists. 65*.2276-2286. doi:10.2146/ajhp070364.

Kotsis, J. (2014, December 23). Amherstburg police continue to test body-worn video cameras. *The Windsor Star*. Retrieved from: http://windsorstar.com/news/local-news/amherstburg-police-continue-to-test-body-worn-video-cameras.

Kumar, T. K. (1975). Multicollinearity in regression analysis. *Review of Economics and Statistics, 57*(3), 365-366. Retrieved from http://www.mitpressjournals.org/loi/rest

Lee, Y., Hsieh, Y., & Chen, Y. (2013). An investigation of employees' use of e-learning systems: Applying the technology acceptance model. *Behaviour & Information Technology*, *32*(2), 173-189. doi:10.1080/0144929X.2011.577190

Legris, P., Ingham, J., & Collerette, P. (2003). Why do people use information technology? A critical review of the technology acceptance model. *Information & Management, 40*(1), 191-204. Retrieved from http://www.elsevier.com/locate/dsw

Lieb, D. A., & Zagier, A. S. (2014, August 16). Ferguson police: Cop shot teen, unaware he was robbery suspect. *Global News*. Retrieved from http://globalnews.ca/news/1509465/ferguson-police-to-name-cop-inmichael-brown-shooting/.

Liu, X. S. (2012). Implications of statistical power for confidence intervals. *British Journal of Mathematical and Statistical Psychology*, *65*(3), 427-437. doi:10.1111/j.2044-8317.2011.02035.x

Lum, C., Hibdon, J., Cave, B., Koper, C. S., & Merola, L. (2011). License plate reader (LPR) police patrols in crime hot spots: an experimental evaluation in two adjacent jurisdictions. *Journal of Experimental Criminology, 7*(4), 321-345. doi:10.1007/s11292-011-9133-9

Madden, T. J., Ellen, P. S., & Ajzen, I. (1992). A comparison of the theory of planned behavior and the theory of reasoned action. *Personality and Social Psychology Bulletin, 18*(1), 3-9. doi:10.1177/0146167292181001.

Mateescu, A., Rosenblat, A., & Boyd, D. (2015). Police body-worn cameras. *Data & Society Research Institute*. Retrieved from

http://www.datasociety.net/pubs/dcr/policebodyworncameras.pdf

Martinot, S. (2013). On the epidemic of police killings. *Social Justice, 39*(4), 52-75. Retrieved from http://www.socialworkers.org/pressroom/features/Issue/peace.asp

Maskaly, J., & Donner, C. M. (2015). A theoretical integration of social learning theory with terror management theory: Toward an explanation of police shootings of unarmed suspects. *American Journal of Criminal Justice, 40*(2), 205-224. doi:10.107/s12103-015-9293-7

Mazerolle, L., Antrobus, E., Bennett, S., & Tyler, T. R. (2013). Shaping citizen perceptions of police legitimacy: A randomized field trial of procedural justice. *American Society of Criminology, 51*(1), 33-72. doi:10.1111/j.1745-9125.2012.00289.x

McCusker, K., & Gunaydin, S. (2014). Research using qualitative, quantitative or mixed methods and choice based on research. *Perfusion.* doi:10.1177/0267659114559116

Menachemi, N. (2011). Assessing response bias in web survey at a university faculty. *Evaluation & Research in Education, 24*(1), 5-15. doi:10.1080/09500790.2010.526205

Mengshoel, A. M. (2012). Mixed methods research – so far easier said than done? *Manual Therapy, 17*(4), 373-375. doi:10.1016/j.math.2012.02.006

Menichelli, F. (2013). Setting the watch: Privacy and the ethics of CCTV Surveillance (Studies in penal theory and penal ethics). *Surveillance & Society, 11*(1/2), 213-214. Retrieved from http://www.surveillance-and-society.org

Merola, L. M., Lum, C., Cave, B., & Hibdon, J. (2012). Community support for license plate recognition. *International Journal of Police Strategies & Management, 37*(1), 30-51. doi:10.1108/pijpsm-07-2012-0064

Mertler, C. A., & Vannatta, R. A. (2013). *Advanced and multivariate statistical methods* (5th ed.). Los Angeles, CA: Pyrczak.

Miller, D. C., (1991). *Handbook of research design and social measurement* (*5th ed*.). Newbury Park, CA: Sage.

Miller, D. C., & Salkind, N. J. (2002). *Handbook of research design and social* measurement (6th ed.). Newbury Park, CA: Sage.

Miller, L., & Toliver, J. (2014). Implementing a body-worn camera program: Recommendations and lessons learned. *The e-newsletter of the COPS Office, 7*(10). Retrieved from http://cops.usdoj.gov/html/dispatch/10-2014/body_worn_ camera_program.asp

Minium, E. W. (1978). *Statistical reasoning in psychology and education*. New York, NY: John Wiley & Sons.

Meyers, R. H. (1990). *Classical and modern regression application* (2nd ed.). Pacific Grove, CA: Duxbury.

Nachmias, C. F. (2015). *Research methods in the social sciences* (8th ed.). New York, NY: Worth Publishers.

Nagin, D. S. (2013). Deterrence in the 21st Century. *Crime and Justice, 42*(1), 1975-2025. doi:10.1086/670398

Nalla, M. K., & Boke, K. (2011). What's in a name? Organizational, environmental, and

cultural factors on support for community policing in Turkey and the U.S. *European Journal on Criminal Policy and Research, 17*(4), 285–303. doi:10.1007/s10610-011-9152-0

National Institute of Justice. (2016). *Research on body-worn cameras and law enforcement.* Retrieved from http://www.nij.gov/topics/law-enforcement/technology/pages/body-worn-cameras.aspx

Noordzij, M., Dekker, F. W., Zoccali, C., & Jager, K. J. (2011). Sample size calculations. *Nephron Clinical Practice, 118*(4), 319-323. doi:10.1159/000322830

Pallant, J. (2010). *SPSS survival manual: A step by step guide to data analysis using SPSS (4th ed.).* Berkshire, England: Open University Press, McGraw-Hill House.

Park, E. & del Pobil, A. (2013). Technology acceptance model for the use of tablet PCs *Wireless Personal Communications, 73*(4), 1561-1572. doi:10.1007/s11277-013-1266-x.

Park, S. Y. (2009). An analysis of the technology acceptance model in understanding University students' behavioral intention to use e-learning. *Educational Technology & Society, 12*(3), 150-162. Retrieved from http://www.ifets.info/

Paternoster, R. (2010). How much do we really know about criminal deterrence? *Journal of Criminal Law & Criminology,* 100(3), 765-823. Retrieved from http://scholarlycommons.law.northwestern.edu/jclc/

Patterson, B., & Morin, K. (2012). Methodological considerations for studying social process. *Nurse Researcher, 20*(1), 33-38. Retrieved from http://nurseresearcher.rcnpublishing.co.uk/

Petrocelli, J. V. (2003). Hierarchical multiple regressions in counseling research: Common problems and possible remedies *Measurement and Evaluation in Counseling and Development*. *36*, 9-22. Retrieved from https://www.researchgate.net/profile/John_Petrocelli/publication

Pilcher, J., & Bedford, L. A. (2011). Hierarchies of evidence in education. *The Journal of Continuing Education in Nursing, 42*(8), 371–377. doi:10.3928/00220124-20110401-03

Piotrowiski, C., & Guyette, R. W. (2010). The case for the semantic differential in organizational and business research. *Journal of Instructional Psychology, 37*(4), 337-339. Retrieved from http://www.projectinnovation.biz/jip.html

Piquero, A. R., Brame, R., Fagan, J., & Moffitt, T. E. (2006). Assessing the offending activity of criminal domestic violence suspects: Offense specialization, escalation, and de-escalation evidence from the spouse assault replication program. *Public Health Reports, 121*(4), 409-418. Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1525349/

Ragnedda, M. (2011). Social control and surveillance in the society of consumers. *International Journal of Sociology and Anthropology, 3*(6), 180-188. Retrieved from http://www.academicjournals.org/ijsa

Ready, J. T., & Young, J. T. N. (2015). The impact of on-officer video cameras on police-citizen contacts: Findings from a controlled experiment in Mesa, AZ. *Journal of Experimental Criminology, 11*(3), 445-458. doi:10.1007/s11292-015-9237-8

Reeves, S., Albert, M., Kuper, A., & Hodges, B. O. (2008). Why use theories in qualitative research? *British Medical Research, 337*(a), 631-634. doi:10:1136/bmj.a949.

Regan, P. M. (2011). Response to Bennett: Also in defense of privacy. *Surveillance & Society, 8*(4), 497-499. Retrieved from http://www.surveillance-and-society.org/

Reisig, M. D., McCluskey, J. D., Mastrofski, S. D., & Terrill, W. (2004). Suspect disrespect toward the police. *Justice Quarterly*, *21*(2), 241–268. doi:10.1080/07418820400095801

Reynolds, P. D. (2007). *A Primer in Theory Construction.* (Custom ed.) Boston, MA: Allyn & Bacon Publishers.

Rogan, M. (n.d.). The killing of Sammy Yatim. *Toronto Life*. Retrieved October 11, 2016, from http://torontolife.com/city/the-killing-sammy-yatim/

Rosenfeld, R. (2015). Was there a Ferguson effect on crime in St. Louis? *Sentencing Project.* Retrieved July 12, 2016, from http://www.sentencingproject.org

Sanchez-Ruiz, J., Munoz-Leiva, F., & Montoro-Rios, F. J. (2011). Improving retention rate and response quality in web-based surveys. *Computer in Human Behavior, 28*(2), 507-514. doi:10.1016/j.chb.2011.10.023

Satter, R. G. (2007, July 13). Britain straps video cameras to police helmets. *NBC News.* Retrieved from http://www.nbcnews.com/id/19750278/ns/world_news-europe/t/britain-straps-video-cameras-police-helmets/#.VjkIjtKrTs1

Sauermann, H., &Roach, M. (2013). Increasing web survey response rates in innovation research: An experimental study of static and dynamic contact design features.

Research Policy, 42(1), 273-286. doi:1016/j.respol.2012.05.003

Sawyer, S. F. (2009). Analysis of variance: The fundamental concepts. *Journal of Manual & Manipulative Therapy, 17*(2), 27E-38E. doi:10.1179/jmt.2009.17.2.27e

Schneider, A., Hommel, G., & Blettner, M. (2010). Linear regression analysis: Part 14 of a series on evaluation of scientific publications. *Deutsches Arzteblatt International, 107*(44), 776-782. doi:10.3238/arztebl.2010.0776

Schreiber, S. (2013). Scenes from a body-worn camera. *Cygnus Law Enforcement Group.* Retrieved from http://www.officer.com.

Schwartz, A. (2013). Chicago's video surveillance cameras: A pervasive and poorly regulated threat to our privacy. *Northwestern Journal of Technology and Intellectual Property, 11*(2), 45-57. Retrieved from http://scholarlycommons.law.northwestern.edu/njtip/ vol11/iss2/4

Sela-Shayovitz, R. (2015). Police legitimacy under the spotlight: Media coverage of police performance in the face of a high terrorism threat. *Journal of Experimental Criminology, 11*(1), 117-139. doi:10.1007/s11292-014-9213-8

Silvia, P. J., & Duval, T.S. (2001). Objective self-awareness theory: Recent progress and enduring problems. *Personality and Social Psychology Review, 5*(3), 230-241. doi:10.1207/S15327957PSPR0503_4

Silvia, P. J., & Phillips, A. G. (2013). Self-awareness without awareness? Implicit self-focused attention and behavioral self-regulation. *Self-Identity, 12*(2), 114-127. doi:10:1080/15298868.2011.639550

Simon, B. (2005). The return of panopticism: Supervision, subjection, and the new

surveillance. *Surveillance & Society, 3*(1), 1-20. Retrieved from http://www.surveillance-and-society.org/

Simmons, R. (2013). Ending zero-sum game: How to increase the productivity of the fourth amendment. *Harvard Journal of Law and Public Policy, 36*(2), 549-604. Retrieved from http://www.harvard-jlpp.com/

Sims, C. R. (2016). Rate–distortion theory and human perception. *Cognition, 152*(1), 181-198. doi:10.1016/j.cognition.2016.03.020.

Slinker, B. K., & Glantz, S. A. (2008). Multiple linear regression accounting for multiple simultaneous determinants of a continuous dependent variable. *Circulation, 117*(13), 1732-1737. doi:10.1161/CIRCULATIONAHA.106.654376

Smith, A. T. H. (2009). Cops with cameras, what can they do? *Cambridge Law Journal, 68*(3), 501-503. doi:10.1017/S000819730999033X.

Smith, D. (1998, July/August). To serve and protect. *Sheriff, 50*(4), 5. Retrieved from http://www.trinityjournal.com/news/sheriffs_report/

Smykla, J. O., Crow, M. S., Crichlow, V. J., & Snyder, J. A. (2016). Police body-worn cameras: Perceptions of law enforcement leadership. *American Journal of Criminal Justice, 41*(1), 424-443. doi:10.1007/s12103-015-9316-4

Stanley, J., (2013). Police body-mounted cameras: With right policies in place, a win for all. Retrieved from https://www.bja.gov/bwc/pdfs/ACLU-Police-body-mounted cameras.pdf.

Suri, H. (2011). Purposeful sampling in quantitative research synthesis. *Quantitative Research Journal, 11*(2), 63-75. doi:10.3316/QRJ1102063

Survey Monkey. (2013). Retrieved October 11, 2013, from http://www.surveymonkey.com/

Svendsen, G. B., Johnsen, J. K., Almås-Sørensen, L., & Vittersø, J. (2013). Personality and technology acceptance: The influence of personality factors on the core constructs of the technology acceptance model. *Behaviour & Information Technology, 32*(4), 323-334. doi:10.1080/0144929X.2011.553740.

Tabachnick, B. G., & Fidell, L. S (2012). *Using multivariate statistics* (*6th ed*.). Englewood Cliffs, NJ: Prentice-Hall.

Takagi, P. (2014). A garrison state in democratic society. *Social Justice, 40*(1/2), 118-130. doi:10.1007/978-1-349-16588-9_9

Tappen, R. M. (2010). *Advanced nursing research.* Sudbury, MA: Jones & Bartlett Learning.

Taquechel, E. F., & Lewis, T. G. (2012). How to quantify deterrence and reduce critical infrastructure risk. *Homeland Security Affairs, 8*(1), 1-29. Retrieved from https://www.hsaj.org/

Tavakol, M., & Dennick, R. (2011). Making sense of Cronbach's alpha. *International journal of medical education*, *2*, 53–55.

Taylor, E. (2016). Lights, camera, redaction…police body-worn cameras: Autonomy, discretion and accountability. *Surveillance & Society*, *14*(1), 128-132. Retrieved from ttp://search.proquest.com.ezp.waldenulibrary.org/criminaljusticeperiodicals/

Teddlie, C., & Yu, F. (2007). Mixed methods sampling: A typology with examples. *Journal of Mixed Methods Research, 1* (77). doi:10.1177/2345678906292430.

The editorial board (2013, August 12). Racial discrimination in Stop-and-Frisk. *The New York Times.* Retrieved from http://www.nytimes.com/2013/08/13/opinion/racial-discrimination-in-stop-and-frisk.html?

Timm, T. (n.d.). The Ferguson effect is just a ploy to reduce scrutiny of the police. *The Guardian.* Retrieved from http://www.theguardian.com

Trochim, W.M.K., (2006). Experimental design: research methods knowledge base. Retrieved from http://www.socialresearchmethods.net/kb/desexper.php.

Trusty, J. (2011). Quantitative articles: Developing studies for publications in counseling journals. *Journal of Counseling & Development, 89*(3), 261-267. doi:10.1002/j.1556-6678.2011.tb00087.x

United States Department of Justice. (2015). Investigation of the Ferguson Police Department. Retrieved from http://www.justice.gov/

University of Cambridge (n.d.). First scientific report shows police body-worn-cameras can prevent unacceptable use-of-force. *Research.* Retrieved July 16, 2016 from http://www.cam.ac.uk/research/news/first-scientific-report-shows-police-body-worn-cameras-can-prevent-unacceptable-use-of-force#sthash.sFyz61Ng.dpuf.

Uyanik, G. K., & Guler, N. (2013). A study on multiple linear regression analysis. *Procedia-Social and Behavioral Sciences, 106*, 234-240. doi:10.1016/j.sbspro.2013.12.027

Van Rassel, J. (2013, August 18). Calgary planning to put cameras on more police. *Calgary Herald.* Retrieved from http://www.calgaryherald.com/news/calgary/calgary+planning+cameras+more+p

olice+with+video/8807278/story.html

Venkatesh, V., & David, D. (2000). A theoretical extension of the technology acceptance model: Four longitudinal field studies. *Management Science, 46*(2), 186-204. Retrieved from http://www.vvenkatesh.us/Downloads/papers

Verhagen, T., Hooff, B., & Meents, S. (2015). Toward a better use of the semantic differential in IS research: An integrative framework of suggested action. *Journal of the Association for Information Systems, 16*(2). 108-143. Retrieved from http://aisel.aisnet.org/jais/

Vito, G. F., Blankenship, M. B., & Kunselman, J. C., (2008). *Statistical analysis in criminal justice and criminology: A user's guide*. (*2nd ed.)* Long Grove, IL: Waveland Press.

Waddle, K. (2016). How license-plate readers have helped police and lenders target the poor: Law enforcement can access privately-collected location information about cars and some low-income neighborhoods have faced extra scrutiny. *The Atlantic.* Retrieved from https://www.theatlantic.com/

Welch, M. (2011). Counterveillance: How Foucault and the Groupe d'Information sur les prisons reversed the optics. *Theoretical Criminology, 15*(3), 301-313. doi:10.1177/1362480610396651.

Welsh, B. C., & Farrington, D. P. (2009). Public area CCTV and crime prevention: An updated systematic review and meta-analysis. *Justice Quarterly*, *26*(4), 716–745. doi:10.1080/07418820802506206

White, M. D. (2014). Police officer body-worn cameras: Assessing the evidence.

Retrieved from https://www.ojpdiagnosticcenter.org/sites/default/files/spotlight/download/Police%20Officer%20Body-Worn%20Cameras.pdf

Williams, M. N., Grajales, C. A. G., & Kurkiewicz, D. (2013). Assumptions of multiple regression: Correcting two misconceptions. *Practical Assessment, Research & Evaluation, 18*(11), 1-14. Retrieved from http://pareonline.net/

Wilson-Van Voorhis, C. R., & Morgan, B. L. (2007). Understanding power and rules of thumb for determining sample sizes. *Tutorials in Quantitative Methods for Psychology, 3*(2), 4350. doi:10.20982/tqmp.03.2.p043

Wines, M., & Cohen, S. (2015, April 30). Police killings rise slightly, though increased focus may suggest otherwise. *The New York Times*. Retrieved from http://www.nytimes.com/2015/05/01/us/no-sharp-rise-seen-inpolice-killings-though-increased-focus-may-suggest-otherwise.htm

Wing, N. (2015, October 13). Study shows less violence, fewer complaints when cops wear body cameras. *Huffington Post.* Retrieved from http://www.huffingtonpost.com/entry/police-body-camera-study

Winhusen, T., Winstanley, E. L., Somoza, E., & Brigham, G. (2012). The potential impact of recruitment method on sample characteristics and treatment outcomes. *Drug & Alcohol Dependence, 120*(1-3), 225-228. doi:10.1016/j.drugalcdep.2011.06.014

Wright, K. B. (2005). Researching Internet-based populations: Advantages and disadvantages of online survey research, online questionnaire authoring software

packages, and web survey services. *Journal of Computer-Mediated Communication, 10*(3), 11. doi:10.1111/j.1083-6101.2005.tb00259.x

Zhang, W., & Xu, P. (2011). Do I have to learn something new? Mental models and the acceptance of replacement technologies. *Behavior & Information Technology, 30*(2), 201-211. doi:10.1080/0144929X.2010.4896665.

Appendix A: Consent Form

You are invited to take part in a research study on police perceptions of the body-worn camera technology. The researcher is inviting all sworn field officers in a southern county sheriff's department to be in the study. This form is part of a process called informed consent to allow you to understand this study before deciding whether to take part. This study is being conducted by a researcher named Jonah Obasi, who is a doctoral student at Walden University.

Background Information. The purpose of the current study is to understand how law enforcement officers in a southern county sheriff's department perceive and accept the body-worn camera technology. In conducting this study, an attempt will also be made to identify the possible underlying factors such as demographic differences in the officers' age, and years of service, and how it relates to police officer's overall acceptance of body-worn cameras as a component of their regular uniform.

Procedures. If you agree to be in this study, you will be asked to:

- Answer some demographic questions; some select a choice, and some placing an X in a blank question for a total of 28 questions to answer completely.
- Questions should take no more than 10 minutes at the most.

Here is one sample question:
Considering all things, using the body-worn camera in my job is (choices are, Good –Neutral – Bad).

Voluntary Nature of the Study. This study is voluntary. Everyone will respect your decision of whether or not you choose to be in the study. No one at the sheriff's agency will treat you differently if you decide not to be in the study. If you decide to join the study now, you can still change your mind later. You may stop at any time.

Risks and Benefits of Being in the Study. Being in this type of study involves some risk of the minor discomforts that can be encountered in daily life, such as becoming upset due to the nature of the questions. Being in this study would not pose a risk to your safety or well-being. Therefore, it is unlikely that participation will arouse any acute discomfort. It is understood that sworn officers have sworn oath and departmental policies governing what may not be divulged concerning specifics of crime and victims

Anticipated benefits include:
• The positive impact of your part in improving police-community relations.
• Personal satisfaction for your contribution to knowledge base training on the use of body-worn cameras.

Payment. No compensation is offered for your voluntary participation.

Privacy. Any information you provide will be kept anonymous. The researcher will not use your personal information for any purposes outside of this research project. Also, the researcher will not include your name or anything else that could identify you in the study reports. Data will be kept secure by placement in a locked box. Data will be kept for a period of at least 5 years, as required by the university.

Contacts and Questions. If you have questions about the research, you may contact the researcher via Jonah.obasi@waldenu.edu or 678-438-8668. The researcher's dissertation chair is Dr. Barbara Benoliel who can be reached at 416-512-8558 or by e-mail at Barbara.benoliel@mail.waldenu.edu. If you want to talk privately about your rights as a participant, you can call Dr. Leilani Endicott. She is the Walden University staff member who can discuss this with you. Her phone number is 1-800-925-3368

Obtaining Your Consent. If you feel you understand the study well enough to make a decision about it, please indicate your consent by completing the survey.

Appendix B: Permission to Use the TAM

From: Jonah Obasi Jonah.obasi@waldenu.edu
Date: January 16, 2017, at 6:47 PM
Subject: Requesting your permission to use TAM instrument for my dissertation

Dissertation Title: Police perceptions of Body-worn Camera Technology

Dear Dr. Davis

My name is Jonah Obasi, a doctoral student at Walden University. The purpose of my study is to use a quantitative method of investigation to understand how law enforcement officers in a southern county sheriff's department perceive and accept body-worn camera technology. I will also attempt to identify possible underlying demographic differences including officers' gender and years of service that may be related to police officers' overall acceptance of body-worn cameras as a component of their regular uniform.

After an extensive search of the literature to determine available instruments to measure how and why people accept new technology, I discovered the Technology Acceptance Model (TAM) instrument you developed in 1989 to measure respondents' attitude toward a computer-based information system. I want to use this validated survey instrument for collecting and analyzing my data. I am confident that the instrument will be able to measure accurately the perceived ease of use, perceived usefulness, and attitude of officers in the southern county sheriff's department toward the body-worn camera technology.

This study is being supervised by dissertation committee members Barbara Benoliel, PhD and Tina Jaeckle, PhD. I am therefore seeking your permission to use this instrument for data collection and analysis in my dissertation.

Sincerely,

Jonah Obasi

From: [truncated]
To: Jonah Obasi Jonah.obasi@waldenu.edu
Date: January 16, 2017, at 10:20 PM
RE: Requesting your permission to use TAM instrument for my dissertation

Dear Jonah

You have my permission to use and adapt the TAM instruments for your interesting and important research project.

Best wishes

[truncated]

Appendix C: Original TAM Questionnaire

USER REACTION TO EXISTING SYSTEMS

We would like to request your voluntary participation in this brief survey, the purpose of which is to test and refine a set of system rating scales. In the future, these scales will be used to measure user reactions to new computer systems. For testing purposes, the survey asks about two existing systems, chosen simply because of their wide availability at the lab. Our interest is not in these systems directly, but rather in the statistical properties of the rating scales themselves. Your responses will remain completely anonymous. Thank you for your participation.

How to use rating scales:

Today is a sunny day.

Strongly Agree			Neutral			Strongly Disagree
1	2	3	4	5	6	7

By circling the 2, you would be saying that you agree with the given statement.

Sunny days are:

Neutral

Good:_____:_____:_____:__X___:_____:_____:_____:Bad

By placing an X in the center position on the scale, you would be saying that the given statement is neither good nor bad.

Please do not write your name or ID number. This is a confidential survey.

ELECTRONIC MAIL

Questions in this section concern your reactions to the use of electronic mail. By electronic mail, we mean any mail sent via the computer system-- profs notes, messages, memos, files, and so on.

Usage of Electronic Mail

1. Electronic mail is currently available for me to use if I want to.
   Yes ___ No ___ Not Sure ___

2. On the average, I use electronic mail (circle most accurate answer):

Don't use at all	Use less than once each week	Use about once each week	Use several time each week	Use about one each day	Use several times each day

3. I normally spend about _____ hours each week directly using electronic mail.

4. I have been using electronic mail for (pick most accurate answer):

Less than 1 month	between 1 and 3 months	between 3 and 6 months	between 6 months	more than a year and a year

	Strongly Agree			Neutral			Strongly Disagree
5. I use electronic mail because I have chosen to, not because I am required to for my job.	1	2	3	4	5	6	7
6. I am quite knowledgeable about how to use electronic mail.	1	2	3	4	5	6	7

Overall Evaluation of Electronic Mail

All things considered, my using electronic mail in my job is: (Place X mark on each of the scales)

Neutral

Good:_____:_____:_____:_____:_____:_____:_____:Bad

Wise:_____:_____:_____:_____:_____:_____:_____:Foolish

Favourable:____:_____:_____:_____:_____:_____:_____:Unfavourable

Beneficial:_____:_____:_____:_____:_____:_____:_____:Harmful

Positive:_____:_____:_____:_____:_____:_____:_____:Negative

Perceived Ease of Use Scale of Electronic Mail	Strongly Agree			Neutral			Strongly Disagree
1. I find the electronic mail system cumbersome to use.	1	2	3	4	5	6	7
2. Learning to operate the electronic mail system is easy for me.	1	2	3	4	5	6	7
3. Interacting with the electronic mail system is often frustrating.	1	2	3	4	5	6	7
4. I find it easy to get the electronic mail system to do what I want it to do.	1	2	3	4	5	6	7
5. The electronic mail system is rigid and inflexible to interact with.	1	2	3	4	5	6	7
6. It is easy for me to remember how to perform tasks using the electronic mail system.	1	2	3	4	5	6	7
7. Interacting with the electronic mail system requires a lot of mental effort.	1	2	3	4	5	6	7
8. My interaction with the electronic mail system is clear and understandable.	1	2	3	4	5	6	7
9. I find it takes a lot of effort to become skillful at using electronic mail.	1	2	3	4	5	6	7
10. Overall, I find the electronic mail system easy to use.	1	2	3	4	5	6	7

Perceived Usefulness of Electronic Mail	Strongly Agree			Neutral			Strongly Disagree
1. Using electronic mail improves the quality of the work I do.	1	2	3	4	5	6	7
2. Using electronic mail gives me greater control over my work.	1	2	3	4	5	6	7
3. Electronic mail enables me to accomplish task more quickly.	1	2	3	4	5	6	7
4. Electronic mail supports critical aspects of my job.	1	2	3	4	5	6	7
5. Using electronic mail increases my productivity.	1	2	3	4	5	6	7
6. Using electronic mail improves my job performance.	1	2	3	4	5	6	7
7. Using electronic mail allows me to accomplish more work than would otherwise be possible.	1	2	3	4	5	6	7
8. Using electronic mail enhances my effectiveness on the job.	1	2	3	4	5	6	7
9. Using electronic mail makes it easier to do my job.	1	2	3	4	5	6	7
10. Overall, I find the electronic mail system useful in my job.	1	2	3	4	5	6	7

Appendix D. Questionnaire Used in Current Study

How to use rating scales:

Today is a sunny day.

Strongly Agree			Neutral			Strongly Disagree
1	2	3	4	5	6	7

By circling the 2, you would be saying that you agree with the given statement.

Sunny days are:

Neutral

Good:_____:_____:_____:__X___:_____:_____:_____:Bad

By placing an X in the center position on the scale, you would be saying that the given statement is neither good nor bad.

Please do not write your name or ID number. This is a confidential survey.

Questions in this section concern your reactions to the use of the body-worn camera.

Frequency of Use

1. On the average, I use body-worn camera (circle most accurate answer)

Don't use at all	Use less than once each week	Use about once each week	Use several time each week	Use about one each day	Use several times each day

Attitude Scale (Overall Evaluation of Body-worn Camera)

All things considered, using body-worn camera in my job is:

Neutral

Good:_____:_____:_____:_____:_____:_____:_____:Bad

Wise:_____:_____:_____:_____:_____:_____:_____:Foolish

Favourable:____:_____:_____:_____:_____:_____:_____:Unfavourable

Beneficial:_____:_____:_____:_____:_____:_____:_____:Harmful

Positive:_____:_____:_____:_____:_____:_____:_____:Negative

Perceived Ease of Use Scale	Strongly Agree			Neutral			Strongly Disagree
1. I find body-worn cameras cumbersome to use.	1	2	3	4	5	6	7
2. Learning to operate the body-worn camera is easy for me.	1	2	3	4	5	6	7
3. Interacting with the body-worn camera is often frustrating.	1	2	3	4	5	6	7
4. I find it easy to get the body-worn camera to do what I want it to do.	1	2	3	4	5	6	7
5. The body-worn camera is rigid and inflexible to interact with.	1	2	3	4	5	6	7
6. It is easy for me to remember how to perform tasks using the body-worn camera.	1	2	3	4	5	6	7
7. Interacting with the body-worn camera requires a lot of mental effort.	1	2	3	4	5	6	7
8. My interaction with the body-worn camera is clear and understandable.	1	2	3	4	5	6	7
9. I find it takes a lot of effort to become skillful at using body-worn camera.	1	2	3	4	5	6	7
10. Overall, I find the body-worn camera easy to use.	1	2	3	4	5	6	7

Perceived Usefulness of Body-Worn Camera	Strongly Agree			Neutral			Strongly Disagree
1. Using body-worn camera improves the quality of the work I do.	1	2	3	4	5	6	7
2. Using body-worn camera gives me greater control over my work.	1	2	3	4	5	6	7
3. Body-worn camera enables me to accomplish task more quickly.	1	2	3	4	5	6	7
4. Body-worn camera supports critical aspects of my job.	1	2	3	4	5	6	7
5. Using body-worn camera increases my productivity.	1	2	3	4	5	6	7
6. Using body-worn camera improves my job performance.	1	2	3	4	5	6	7
7. Using body-worn camera allows me to accomplish more work than would otherwise be possible.	1	2	3	4	5	6	7
8. Using body-worn camera enhances my effectiveness on the job.	1	2	3	4	5	6	7
9. Using body-worn camera makes it easier to do my job.	1	2	3	4	5	6	7
10. Overall, I find the body-worn camera system useful in my job.	1	2	3	4	5	6	7

Demographic Questions

A. What is your gender? (circle one) Female Male

B. What are your years of experience?

1. 2 or fewer
2. 3 to 5
3. 6 to 10
4. 11 to 20
5. 21 or more

Appendix E: NIH Certificate

Certificate of Completion

The National Institutes of Health (NIH) Office of Extramural Research certifies that **Jonah Obasi** successfully completed the NIH Web-based training course "Protecting Human Research Participants".

Date of completion: 04/08/2017.

Certification Number: 2371981.

Appendix F: Cooperation From Sheriff's Office.

From: Jonah Obasi Jonah.obasi@waldenu.edu
Date: January 29, 2017 10:24 PM
Subject: Requesting cooperation letter
Dear [truncated]

I am a graduate student of criminal justice at Walden University. My dissertation topic is *Police Officers' Perceptions of Body-Worn Camera Technology*. The purpose of the study is to use quantitative methods of investigation to understand how law enforcement officers in a southern county sheriff's department perceive and accept the body-worn camera technology. I will also examine if their acceptance relates to its use as part of the regular uniform. In conducting this study, I will attempt to identify possible underlying factors such as officers' gender and years of service related to police officers' overall acceptance of body-worn cameras as a component of their regular uniform. I will employ a quantitative exploratory approach by using a questionnaire.

The significance of this present study is that it may provide perspective into how police officers perceive and accept body-worn cameras as a component of their regular uniform. The outcomes can address a gap in the literature concerning the perceptions of officers using body-worn camera technology. Although law enforcement agencies are rushing to equip their officers with body-worn cameras, I have found no empirical evidence of officer's perceptions of wearing body-worn cameras. Knowledge gained from the results of this study may have direct implications for policymakers. Disseminating the results of this study ultimately has the potential to educate law enforcement leadership, giving them the newly acquired knowledge to craft policies for positive social change, by developing better training the officers on the importance of the body-worn cameras. The new knowledge gained may help improve relationships between law enforcement agencies and the communities they serve.

I am therefore asking for your written permission to engage [truncated] in collecting data for this important study. I will collect the data using an anonymous, web-based questionnaire, distributed to participants through a Survey Monkey web link. Unlike paper surveys, which take time to distribute, electronic surveys are typically faster and more cost efficient because of the expedited implementation and data import facility. Web-based surveys have demonstrated efficacy as an important data collection tool in studies of information technology. The survey will include instructions for participants to complete the survey while away from work to prevent unnecessary and unauthorized overtime. I will not offer monetary compensation to the participants as the outcomes of the study is solely for educational purposes. I have attached a sample of the survey instrument for your review.

For any question or clarifications, please don't hesitate to contact me at [truncated] by e-mail, jonah.obasi@waldenu.edu

Sincerely,

Jonah Obasi

From: [truncated]
To: Jonah Obasi <Jonah.obasi@waldenu.edu>
Date: February 14, 2017 at 11:22AM

DO. Obasi,

You are approved to proceed with this survey. Good luck to you in your educational endeavors.

[truncated

Electronic signatures are regulated by the Uniform Electronic Transactions Act. Legally, an "electronic signature" can be the person's typed name, their email address, or any other identifying marker. An electronic signature is just as valid as a written signature as long as both parties have agreed to conduct the transaction electronically.

Appendix G: IRB Approval.

Dear Mr. Obasi,

This email is to notify you that the Institutional Review Board (IRB) has approved your application for the study entitled, "Police Perceptions of the Body-Worn Camera Technology."

Your approval # is 05-30-17-0266372. You will need to reference this number in your dissertation and in any future funding or publication submissions. Also attached to this e-mail is the IRB approved consent form. Please note, if this is already in an on-line format, you will need to update that consent document to include the IRB approval number and expiration date.

Your IRB approval expires on May 29, 2018. One month before this expiration date, you will be sent a Continuing Review Form, which must be submitted if you wish to collect data beyond the approval expiration date.

Your IRB approval is contingent upon your adherence to the exact procedures described in the final version of the IRB application document that has been submitted as of this date. This includes maintaining your current status with the university. Your IRB approval is only valid while you are an actively enrolled student at Walden University. If you need to take a leave of absence or are otherwise unable to remain actively enrolled, your IRB approval is suspended. Absolutely NO participant recruitment or data collection may occur while a student is not actively enrolled.

If you need to make any changes to your research staff or procedures, you must obtain IRB approval by submitting the IRB Request for Change in Procedures Form. You will receive confirmation with a status update of the request within 1 week of submitting the change request form and are not permitted to implement changes prior to receiving approval. Please note that Walden University does not accept responsibility or liability for research activities conducted without the IRB's approval, and the University will not accept or grant credit for student work that fails to comply with the policies and procedures related to ethical standards in research.

When you submitted your IRB application, you made a commitment to communicate both discrete adverse events and general problems to the IRB within 1 week of their occurrence/realization. Failure to do so may result in invalidation of data, loss of academic credit, and/or loss of legal protections otherwise available to the researcher.

Both the Adverse Event Reporting form and Request for Change in Procedures form can be obtained at the IRB section of the Walden website: http://academicguides.waldenu.edu/researchcenter/orec

Researchers are expected to keep detailed records of their research activities (i.e., participant log sheets, completed consent forms, etc.) for the same period of time they retain the original data. If, in the future, you require copies of the originally submitted IRB materials, you may request them from Institutional Review Board.
Both students and faculty are invited to provide feedback on this IRB experience at the link below:

http://www.surveymonkey.com/s.aspx?sm=qHBJzkJMUx43pZegKlmdiQ_3d_3d

Sincerely,
Libby Munson
Research Ethics Support Specialist
Office of Research Ethics and Compliance

Walden University
100 Washington Avenue South, Suite 900
Minneapolis, MN 55401
Email: irb@mail.waldenu.edu
Phone: (612) 312-1283
Fax: (626) 605-0472

Information about the Walden University Institutional Review Board, including instructions for application, may be found at this link: http://academicguides.waldenu.edu/researchcenter/orec