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Effectiveness of High-Fidelity Simulation in Changing Citizens' Attitudes Toward Police

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Effectiveness of High-Fidelity Simulation in Changing

Citizens' Attitudes Toward Police

Jeffrey A. Pardue

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Abstract

The use of deadly force is the most serious decision a police officer has to make. Recent highly-publicized law enforcement lethal encounters have led to a growing need for police to proactively engage in educational discussions with community members in hopes of improving the perceptions of their work. The purpose of this study was to determine the impact of an experiential learning encounter with a high-fidelity police deadly force judgment simulator on attitudes toward police among adult participants. The attributes of gender, age, race/ethnicity, educational attainment, marital status and whether or not the participant had a friend or family member in law enforcement were also examined with respect to attitudinal change towards police or likelihood to engage in supportive police action. This study reflected a single-group pre-experimental research design, with a convenience sample of adults recruited from various Southern Maine organizations and affiliations. A total of 52 adults participated in the study. A valid and reliable Likert-scale instrument was used, identified from the review of the literature and used with permission from the instrument author. Analysis of all 25-instrument item statements revealed 19 to be statistically significant more positive or favorable from pre-testing to post-testing. Stronger support for the police was reported after the educational encounter with the simulator, with female participants reporting an overall more positive attitude about the police, and participants with a friend or relative in the law enforcement profession indicating a stronger likelihood to defend police actions publically. This study upholds the merit of utilizing community policing strategies to lower the social distance between citizens and police, fostering familiarity and more positive police attitudes.

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CHAPTER I

INTRODUCTION

Law enforcement and the citizens they serve are nearing a crossroad. Amid civil unrest over highly publicized deadly encounters involving minority suspects, police officer's decisions on the use of lethal force are being scrutinized now more than ever. While the media and general populace have heavily scrutinized these episodes, do members of the civilian population understand the laws, physiology, and psychology that govern these life and death decisions? Equally as important, can police officials afford to continuously take a defensive approach to community outreach and education on law enforcement's use of force?

The use of deadly force is the most serious decision a police officer has to make (Hontz, 1999). According to Broomé (2011), police deadly force ascended into the public eye in the 1980s and subsequently became a focus of public policy for United States law enforcement. In 1985, the US Supreme Court ruled in *Tennessee v. Garner* (1985) that officers are justified in the use of deadly force to prevent death or serious bodily injury to themselves or a third person. While these requirements are clear, deadly force situations are usually very fast moving. Because of this, the decision on whether the suspect's actions constitute the likelihood of death or serious bodily injury is a subjective one by the officer, and their decision is generally controversial to some members of the community (Hontz, 1999). Additionally, these matters are further complicated when community members examine these split second decisions based on a subject's

age, race, ethnicity, social status, and mental condition at the time of the deadly encounter.

The most recent Federal Bureau of Investigation's (FBI) Law Enforcement Officers Killed and Assaulted (LEOKA) report details that 76 law enforcement officers were killed in line-of-duty incidents in 2013. Of these, 27 police officers died as a result of felonious acts. The average age of the officers who were feloniously killed was 39 years old, with an average occupation service time of 13 years. In addition, 49,851 officers were victims of line-of-duty assaults. Over the last 10 years, more than half-a-million (573,456) law enforcement officers have been assaulted on the job, with 111,985 officers confronted with an assault that could justify the use of deadly force (i.e., firearms, knife/cutting weapon, other dangerous weapons). Due to these potential workplace hazards, law enforcement officials need to be vigilant in defending themselves while protecting their community.

This research study was developed with the aim of addressing the rhetoric and disconnects developing between police officers and the citizens they have sworn to protect. Media and the "Hollywood-effect" have promoted misinformation throughout our popular culture about law enforcement and its use of deadly force. The public often questions: Why don't the police shoot to wound? Why didn't the officer shoot the knife out of the suspect's hand? How could the officer miss at that close distance? Did the officer have to shoot the suspect; he was still several feet away with the knife (Hontz, 1999)? Helping to answer these questions and educate the public about the reality of these situations

may help to quell the disparities that exist between law enforcement and those protected by the law.

Research Question

Building upon the research of Brewster, Sanders, and Stoloff (2005), who studied the effectiveness of citizen police academies in changing the attitudes, beliefs, and behavior of citizen participants, this research study examined whether citizens' attitudes toward police can change in an experiential learning environment. By presenting a brief legal overview of State (ME) and Federal (USA) law on the use of force, coupled with the utilization of a high-fidelity deadly force judgment and decision-making simulator, the research question is posed: Is there a change in attitudes toward police among the Southern Maine Interest Group (SMIG) before and after an educational encounter with the Firearms Training Simulator (FATS)?

Hypothesis

Members of the Southern Maine Interest Group (SMIG) will experience a favorable change in attitudes toward police following an educational encounter with the Firearms Training Simulator (FATS). A favorable change in attitudes toward police will be measured, determined by a reduction in the post-test mean item scores on 25 paired survey items of the instrument.

Delimiters to Limit the Scope of Research

The following demographic data was recorded by the survey

- gender;

- educational attainment;
- age (range);
- marital status;
- race/ethnicity; and
- friends or relatives in law enforcement profession.

Definitions

Attitudes Toward Police: Participants self-report as to knowledge about police work, difficulty of police work, dangerousness of police work, level of interest in police work, adequacy of police training, likelihood of excessive force or abuse of authority, police discretion, other citizens' attitudes toward police, and confrontations due to police versus citizen behavior.

Firearms Training Simulator (FATS): The Firearms Training Simulator creates an immersive environment by utilizing a high-definition overhead projector connected to a real Glock firearm. Participants are exposed to interactive scenarios featuring real actors based on actual law enforcement calls for service.

Weapon recoil is achieved with compressed air or CO₂ gas, providing recoil sufficient to disturb the participant sight picture, requiring the participant to reacquire the target after each shot. The high-fidelity deadly force judgment and decision-making simulator is used for training by many law enforcement agencies in the United States and around the world.

Southern Maine Interest Group (SMIG): Groups of volunteer participants from the Greater Portland community with a shared interest in advancing a specific area of information.

Educational Encounter: Participants engaged in simulated scenarios where they may use lethal force. Prior to these simulated encounters, participants were briefed on both State (ME) and Federal (USA) law that govern law enforcement's use of deadly force. Participants were also instructed on rudimentary firearms operation.

Research Assumptions

There were numerous assumptions that guided this research study. As noted by Leedy and Ormrod, "all assumptions that have a material bearing on the problem should be openly and unreservedly set forth" (2013, p. 44). One assumption is that the Attitudes Toward Police survey (Brewster, et al., 2005) is a valid and reliable instrument thereby measuring the attributes it intends to measure. A second assumption is that the participants comprising the SMIG hold formulated opinions about their local police force. It is assumed participants possess sufficient intellectual capability so as to be able to evaluate the impact of their educational experience and can provide truthful responses. It is also assumed that the FATS instructor has the ability to engage in effective teaching practices both in the classroom and simulation portions of this study.

Importance of Research

A great deal of attention has been focused on law enforcement's use of deadly force, specifically when it involves a minority group member. There are growing concerns among public officials, the news media, and many academic disciplines that a suspect's race has influenced a bias that extends to criminal justice agents and their decision to use (or not use) lethal force (James, Klinger, & Vila, 2014). While numerous studies have examined the rate in which minority citizens have been the subjects of police deadly force in relation to the overall population, very few have examined the community policing educational model and its ability to change participant attitudes toward the police through high-fidelity simulation. While there is no set criteria for community-oriented policing, Morabito (2010) endorsed that community policing should adopt a problem solving orientation, work with key stakeholders in the community, and make changes to the agency organizational structure to facilitate community participants in public safety.

It is the job of law enforcement to meet the needs of its community. In fact, public support is essential to effective policing and crime control (Jefferis, Butcher, & Hanley, 2011). In order for a community policing partnership to work, both the citizens and the police need to work together to address the issues that are important to the public. History is once again repeating itself for United States law enforcement as the use of deadly force by police officers is being met by citizen distrust, anger, misinformation, and sensationalized journalism. The current study was primarily interested in measuring public attitudes toward the police both before and after being exposed to an educational simulated use of

force encounter. If it is determined that attitudes about the police and their use of force can change amongst members of the SMIG, similar community policing efforts could be made in other communities in the United States.

CHAPTER II

LITERATURE REVIEW

Perceptions of Police and Contributing Variables

Police officers, by the very nature of the profession, are servants to the public. As in any service industry, perceptions vary on the quality of service received by the clientele. These perceptions are worthy of measurement as “the multiple duties of the police at all times and in all areas of the community dictate that they must influence the daily life of each citizen” (O’Brien, 1978, p. 304). If the police are to serve the public effectively and acceptably, a constructive working relationship must exist between law enforcement officials and citizens (Worrall, 1999). Lastly, due to the mostly reactive nature of police work, these partnerships with the public play an important role in an officers’ ability to effectively perform their duties (Hurst & Browning, 2000).

According to Brown and Benedict (2002), it was Bellman’s (1935) “Police service rating scale” which provided the original impetus for studies of the public perceptions of the police (p. 543). This topic has since gained great attention, including one of the best known works in the field by Decker (1981) entitled, *Citizen Attitudes Toward the Police: A Review of the Past Findings and Suggestions for Future Policy*. Brown and Benedict (2002) expanded the findings of Decker (1981) by reviewing over 100 articles that examined the perceptions of

and attitudes toward the police, highlighting important findings and drawing formative conclusions about the connections between law enforcement and the citizens they serve.

One of the most consistent literature findings, and emphasized by Brown and Benedict (2002), is the view that the efficacy of law enforcement depends on public satisfaction of the police (Bridenball & Jesilow, 2008). According to Decker (1981), when the integrity of the police is in doubt or questioned, it may reduce their ability to control crime. Furthermore, Brown and Benedict (2002) reported, "It is conceivable that negative perceptions of the police contribute to a cycle of reduced police effectiveness, increased crime, and further distrust of the police" (p. 545).

Three major variables have been identified through the literature as contributing factors to police support: (a) race; (b) age; and (c) contact with the police. Correspondingly, there are numerous studies that have compared police support between white and black citizens, with a majority finding that "blacks" view the police less favorably than "whites" (Brown & Benedict, 2002). Jacob (1971), who conducted a series of interviews with both "whites" and "blacks," found that, "Blacks perceive the police as more corrupt, more unfair, more excitable, more harsh, tougher, weaker, lazier, less intelligent, less friendly, more cruel, and more on the bad than the good side than white respondents" (p. 73). Jefferis, Butcher, and Hanley (2011) drew similar conclusions after their review of the literature, summarizing, "an overwhelming majority of studies have found that minorities generally have a lower perception of police than whites" (p. 82).

Jefferis et al. (2011) suggested that racial differences in perceptions of the police are likely caused by a complex combination of experiences that occur between police and citizens in minority communities and information about such interactions that are related through the media. The primary concern amongst minority citizens is that status characteristics of the individual are impacting how they are treated within the criminal justice system.

Similar divergences were discovered when measuring the public's perception of police in relation to a respondent's age. Brown and Benedict (2002) observed that a vast majority of studies that included age as a variable indicated that younger persons view the police less favorably than older persons (p. 554). Zevitz and Rettammel (1990) offered a possible explanation, as the authors disclosed that senior citizens exhibit higher fear levels and are more inclined to rely on the police for assistance. Conversely, Gaines, Kappeler, and Vaughn (1997) suggested young people value their freedom, which may play a role in their disproportionately negative attitudes toward the police (as cited in Worrall, 1999). Cheurprakobkit's (2000) findings also supported this concept, as he asserted that younger people rate police performance less favorably than older people. Similarly, Hindelang (1974) found that young respondents are less likely than older respondents to think that the police should deal more aggressively with crime. Furthermore, Jefferis, Kaminski, Holmes, and Hanley (2001) reported that young people were more likely to think that the police use too much force and are less likely to be satisfied with police services in comparison to older demographics.

A final consideration that contributes to police support is the nature of contact between citizens and police. Brown and Benedict (2002) acknowledged that most research indicates that positive contact with the police improves perceptions of the police, while negative contact has the opposite effect. Decker (1981) reasoned that involuntary contact with the police (e.g., traffic stop, arrest, etc.) can influence negative attitudes toward the police, but voluntary contact with the police does not necessarily influence positive perceptions. By comparison, Cheurprakobkit (2000) found that citizens who initiated the police contact viewed the police as more favorable than those whose contact was initiated by the police. Engel (2005) added that among police initiated interactions, individuals are more likely to perceive unfair treatment from police officers in discretionary cases (as cited in Jefferis et. al, 2011). These findings are important as personal perception of the police may rely on whether a majority of one's contact with the police comes in a consensual or non-consensual setting.

The Rise of Simulated Learning

While the roots of simulation lie in aviation and military training, the health professions have a long and rich tradition of simulation education. The literature reveals the discipline of nursing has extensively integrated and researched student learning outcomes from engagement in simulation based training. The earliest low-fidelity mannequin was created by the Laerdal Corporation in the form of Resusci-Anne (Hyland & Hawkins, 2009; Seropian, Brown, Gavilanes, & Driggers, 2004). This static mannequin had a spring-based chest wall, permitting the life-like teaching of chest compressions for emergency

department personnel and lay community-oriented cardio-pulmonary resuscitation (CPR) training (Hyland & Hawkins, 2009). This somewhat realistic experience of learning-by-doing with Resusci-Anne provided impetus for expanded development of simulation in nursing education (Hyland & Hawkins, 2009).

Technologic development has supported the ongoing sophistication of simulation in health profession education. Simulation is defined as “activities that mimic the reality of an environment and are designed to demonstrate procedures, decision-making, and critical thinking” (Jeffries, 2005, p. 97). While static, low-fidelity simulators remain available (e.g. plastic arm for intravenous catheter insertion); increasingly simulation education involves life-like digital mannequins and the concept of fidelity. Fidelity, according to Jeffries (2005), provides “real physical inputs and real environmental interactivity” (p. 97). High-fidelity mannequins are programmable to reveal blood pressure, pulse, and respiration measurements, and physiologically respond to the medications and interventions performed on them (Seropian, et al., 2004). The element of fidelity enhances the realism of a scenario, providing students the opportunity to practice in real time how they might intervene in a given situation.

The teaching and learning process in health profession simulation has received considerable attention in the literature. Teaching is commonly conceptualized as actions taken by the educator in executing a simulation event, while learning is described as changes in students’ knowledge, skills, and/or attitudes through a planned simulation experience (Kaakinen & Arwood, 2009). Additionally, teaching commonly involves determining a situation or scenario,

creating learning objectives, determining complexity, execution of the simulation, and de-briefing (Jeffries, 2005). The process of de-briefing is an intentional and essential teaching strategy in simulation, as this allows participants to link their knowledge and understanding with the experience, and supports critical reflection and analysis (Jeffries, 2005). Teaching supports learning, as learning is often measured through changes in participants' knowledge, skills, and/or beliefs (Kaakinen & Arwood, 2009).

Law enforcement has recently recognized the benefits offered by high-fidelity decision making simulators and scenario-based training. By utilizing advanced technological equipment like the FATS, law enforcement professionals are able to train for deadly force encounters in an immersive, non-consequential environment. Saus, Johnsen, Eid, Riisem, Andersen, and Thayer (2006) confirmed the international focus on the use of force in modern police work and the scrutiny by the media of law enforcement's use of weapons to control critical situations. Saus et al. (2006) contended that one principal factor in making adequate decisions in police critical situations is generating and maintaining situational awareness. Situational awareness is defined as the "cognitive processes involved in perceiving and comprehending the meaning of a given environment" (Saus et al., 2006, p. S4). Situational awareness, as noted by Saus et al. (2006), "enhances the capacity to make timely and effective decisions" (p. S4). High-fidelity deadly force judgment simulators are one of the few training tools available to law enforcement that create environments and situations that replicate real-life critical incidents.

Armstrong, Clare, and Plecas (2014) disclosed the primary objective of scenario-based training is to provide a realistic environment that replicates what an officer would expect to encounter in a real-life situation in the course of their duty. According to Groer et al. (2010), police simulation training allows officers a controlled and safe environment to make errors and receive feedback on situations that, if made in real life, could have serious consequences (as cited in Armstrong et al., 2014). This is particularly important for high-risk events, as they occur relatively infrequently and carry significant safety implications for all the involved parties (Armstrong et al., 2014).

Numerous studies have been conducted that measure the various physiological responses of sworn police officers or police cadet trainees as they participate in simulator or scenario-based training(s). Murphy and Ross (2009) assessed the extent to which simulator systems induce measureable stressors in lethal force scenarios. The authors discovered through an analysis of the release of four specific salivary biomarkers that violent scenarios resulted in an increased release relative to the control scenario without violence (Armstrong et al., 2014). The US Federal Law Enforcement Training Center (FLETC) conducted a high-stress law enforcement scenario to compare performance on a stressful scenario-based simulation to a range of physiological and psychological measures. Consistent with other research findings, FLETC researchers found that law enforcement students' performances degraded as heart rate, blood pressure, and cortisol measures increased (as cited in Armstrong et al., 2014). Werth (2011) discovered that problem-based learning exercises implemented by the Idaho

Peace Officer Standards and Training facility resulted in the better development of mechanical and non-mechanical skills in a study of 448 students in 10 police academy cohorts. Finally, Armstrong et al. (2014) examined the impact of scenario-based use of force simulations on police heart rates. The analysis demonstrated that elevated heart rates were observed in all measurable conditions. Further, Armstrong et al. (2014) concluded that, based on the patterns and findings with respect to heart rate, simulated scenarios reproduced the relevant physiological reactions to support their use as a reliable high stress police-training tool. These findings, coupled with the numerous studies above, inject further credibility in the use of high-fidelity simulation in the law enforcement profession.

Changing Public Attitudes Toward the Police

There have been very few studies that have focused on measuring a change in citizens' attitudes toward the police through experiential learning techniques. The most prevalent medium found in the literature has been researchers' use of citizen police academies (CPA). Brewster, Stoloff, and Sanders (2005) explained CPAs as, "mini police academies conducted for citizens, with instruction in many facets of police work" (p. 21). Brewster et al. (2005) summarized:

The general goals of CPAs are to enhance communication with community members, to teach the community about the mission and role of the police, to familiarize participants with some of the problems faced

by police, and to elicit the cooperation of community members. (pp. 21-22)

There have been many published articles that conclude CPAs are effective, but only a few base their conclusions on empirical data (Brewster et al., 2005).

In an effort to quantify CPAs, Brewster et al. (2005) collected pre- and post-test data from two CPAs, held in dissimilar Virginia cities. Brewster et al. (2005) set out to determine whether citizens' knowledge and understanding of police activities, and their attitudes and behaviors toward police, change during their CPA experience. According to the researchers, the CPAs themselves were both fairly traditional, and similar to each other. Brewster et al. (2005) discovered that attitudes and beliefs changed consistently across both departments on a number of dimensions following the CPA, including that CPA participants self-reported that they believed they had greater knowledge about police work, that police work was more difficult, more dangerous, and more interesting, and that the training of police officers was more adequate. In addition, compared to the pre-test, participants in both jurisdictions reported on the post-test that they were less likely to believe that police officers use excessive force or abuse their authority with citizens in general. In one of the two cities (Harrisonburg), participants stated they became less likely to believe that the media's portrayal of police and their activities was fair and accurate.

For law enforcement officials, it has long been suggested that CPAs contribute to even more added benefits for improving community relations. Brewster et al. (2005) discovered through empirical, rather than anecdotal

evidence, that this was true in their study of two Virginia CPAs. Brewster et al. (2005) reported that participants in both CPAs, if the opportunity presented itself, would be significantly more likely to provide police with information about a crime, volunteer or conduct fundraising work for the department, serve as a reserve officer, or write a letter to the editor to either explain or defend police activities. Further, both groups reported a “greater willingness to explain or defend police actions to other citizens and both reported a greater likelihood that they would make suggestions to the police” (p. 31).

The current study aimed to evaluate what impact the FATS has as an experiential learning tool on citizens’ attitudes toward police. The study utilized the same pre- and post-test instrument implemented by Brewster et al. (2005) to measure the effectiveness of the FATS as opposed to CPAs on changing the attitudes, beliefs, and behavior of citizen participants.

CHAPTER III

RESEARCH DESIGN

Context

The following research study was conducted in partnership with Kaplan University (KU), utilizing its classroom space and high-fidelity FATS at their South Portland, Maine campus. KU provided all the necessary training to certify this researcher as an operator of its FATS. Further, KU offered unlimited access to their campus and its facilities for the purposes of this research study.

The study evaluates the SMIG at the individual level. Participants were members of various special interest groups from around the Greater Portland area.

Recruitment was conducted at assorted small-to-medium sized businesses in the area, and participants from other special interest groups were later referred by “word of mouth” from participants who had previously completed the research event(s).

Method

This study was comprised of two main parts: (a) classroom; and (b) simulation. In the classroom portion of this study, participants were given a brief (20-minute) overview of both State (Maine) and Federal (USA) case law regarding the use of deadly force by police officers. In addition to use of force law, participants were instructed on the safe handling and operation of the Glock 17 semi-automatic handgun. The handgun, which feels and operates like a fully functional police duty pistol, had been altered by the simulator manufacturer to work with the simulator and was not capable of chambering live ammunition. It was the aim of this researcher that by providing an overview on use of force law and firearm operation(s), participants were better positioned to make an educated deadly force decision while interacting with the simulator.

Following the classroom portion, participants entered the simulator training room. Individually, participants responded to police calls for service where the FATS briefed the responding “officer” on background and situational call information. The FATS has approximately 80 different pre-recorded scenarios that can branch in hundreds of different directions dependent upon how the participant responds to the particular scene information. This study utilized 12 of these pre-recorded scenarios, with a preference given to more simplistic “shoot

or don't shoot" decision-making simulations. Each participant completed two training scenarios for this study. Following the participant encounters with the simulator, brief video examples of real police use of force encounters were shown to reinforce the fidelity represented by the simulated scenarios.

The study utilized an identical pre-test and post-test questionnaire to compare participants' attitudes toward the police before and after their educational encounter with the FATS. The pre-test was administered before the classroom portion of this study and the post-test was completed after a short debrief at the completion of the simulation. The questionnaire contained 25 items and each included a five-point Likert-scale. Twelve items measured participants' knowledge of police activities and attitudes about police and their work. The remaining 13 items asked participants to rate the likelihood that they would engage in various activities that involved cooperating with police, if the opportunity presented itself. This instrument, which was utilized in the abovementioned research study conducted by Brewster et al. (2005), was personally provided to this researcher by Dr. Joanne Brewster for use in this study.

The analysis for this study reflects quantitative approaches. The researcher collected demographic data in the pre-test to describe the sample. Categorical data such as gender, occupation, race/ethnicity, marital status, and family/friend employment in law enforcement is reported as raw numbers and percentages (Leedy & Ormrod, 2013). The ordinal data of age and educational level was grouped in ranges and reported as percentages (Leedy & Ormrod, 2013). Pre- and

post-test Likert-scale response data was recorded by participants for each item on the instrument. A paired samples *t*-test was performed using SPSS to determine if overall participant responses changed after the educational encounter with the FATS. A *t*-test determines whether the means of the two groups (pre-test and post-test) are statistically different from one another (Creswell, 2014).

Additionally, an ANCOVA test was performed using SPSS to compare the post-test mean item score with the corresponding baseline mean item score with select variables (e.g., gender, race/ethnicity). ANCOVA is a statistical test that “compares two groups in terms of outcomes controlling for covariates” or variables (Creswell, 2014, p. 164). This analysis was conducted to measure if there was statistical change amongst participants and the assorted variables represented in the sample.

Sub-Problems

There are numerous sub-problems that were considered in this research study. An issue central to this topic includes the backgrounds and preexisting police perceptions of the participants. The researcher recognizes the importance of these perceptions as they relate to measurable outcomes in this study. Further, this research design also incorporates multiple variables to include gender, educational attainment, age (range), marital status, race/ethnicity, and whether participants had a friend or relative employed in the law enforcement profession. These variables were identified through the literature as having a potential impact on citizens' attitudes toward police and were included in this study for analysis

purposes. Again, the researcher recognizes these variables may have been a factor in the results of this study.

Contribution

As abovementioned, the goal of this research was to build upon the important findings of Brewster et al. (2005) in changing citizen attitudes toward the police through an experiential learning medium. Brewster et al. (2005) were able to show through empirical data that citizen police academies were effective tools in influencing positive attitudes toward law enforcement in the communities of Harrisonburg and Richmond, Virginia. This researcher, too, expected to see a favorable change in participant attitudes toward police after an educational encounter with the FATS.

This is an important time in our nation's history to conduct studies about the relationships between citizens and law enforcement. This topic, while topical, is also significant to our criminal justice infrastructure as public perceptions play a critical role to effective policing. Due to numerous recent police use of force incidents, a racial divide on police relations has developed. Unfortunately, as Bridenball and Jesilow (2008) observed, the literature fails to provide police practitioners with a clear strategy to improve community matters. Furthermore, it is of little help to police professionals to simply tell them they are disliked, especially since there is very little information in the literature about how to positively change the disconnects that exist between civilians and the police. That is why the important research findings of Brewster et al. (2005) resonate in the police community, as they identify strategies to improve these relationships.

Through the use of high-fidelity simulation, this researcher aimed to recognize a mechanism that might mend some citizens' attitudes toward the police. Lastly, if deemed successful, this research design could be used as an action program that police departments could use to enhance their relationship with the public.

CHAPTER IV

RESULTS

The purpose of this study was to identify if the FATS is an effective experiential learning tool in changing citizens' attitudes toward the police. The researcher conducted 10 community outreach events at KU over a four-month period, beginning in October, 2015 and ending in January, 2016. Each community outreach event began with an overall discussion about the voluntary nature of the participation, and a consent form was distributed and signed by each participant. Participant's rights were reviewed and participants were provided the opportunity to ask questions about the study and the instruments being utilized for the research.

A total of 52 subjects volunteered to participate in this study, with 98% ($N = 51$) completing all phases of the research program. Each community outreach event began with participants completing the pre-test survey, followed by an educational classroom presentation on both State of Maine law and United States of America case law about law enforcement's use of force. The researcher then provided an overview of the FATS, to include its mechanical operation and safe firearms handling. Participants then entered the FATS training space, where participants assumed the role of a police officer and individually responded to one

of 12 predetermined use of deadly force interactive scenarios. Following their interaction, subjects were given the opportunity to discuss their experiences with the researcher and the other participants, a process known as debriefing. At the conclusion of two simulations, all participants completed a post-test survey.

A total of 103 surveys were collected during the research process. Fifty-one of the 52 returned pre-test surveys were successfully match-paired by participant number with 51 collected post-test surveys. One post-test survey was not returned, as that participant withdrew from the study prior to her interaction with the simulator. The reason for this participant's withdrawal is unknown.

Data Cleaning

Data collected was visually inspected and the researcher observed unanswered statements on several pre- and post-test surveys. The researcher began by inputting pre-test responses into SPSS, identifying two unanswered questions on two different surveys. Participants #21 and #41 did not provide a response for question 10 on the pre-test. Imputation was used to address these two missing data points (Fink, 2009). Data analysis of question 10 on the fully complete pre-tests revealed ($M = 2.0$, $SD = 0.91$); therefore, a response of 2.0 was assigned to the missing items.

The researcher then input post-test responses into SPSS, again identifying two unanswered questions on two different surveys. Participant #26 did not provide a response for question eight on the post-test, and participant #10 did not provide a response for question 24. Imputation was used to address these missing data points (Fink, 2009). Data analysis of question eight on the fully complete

post-tests revealed ($M = 2.0$; $SD = 1.06$); therefore, a response of 2.0 was assigned to the missing item in participant #26's post-test. Additionally, data analysis of question 24 on the fully complete post-tests revealed ($M = 1.0$; $SD = 1.05$); therefore, a response of 1.0 was assigned to the missing item in participant #10's post-test.

The researcher also identified an error in the post-test surveys of participants 1-3. Post-test question 12 was omitted in the photocopying process, a problem that was corrected after the first community outreach event. Because of this researcher error, imputation was again used to address these three missing data points in the three affected post-tests (Fink, 2009). Data analysis of question 12 on the fully complete post-tests revealed ($M = 3.0$; $SD = 0.92$); therefore, a response of 3.0 was assigned to the three surveys. Lastly, because participant #29 withdrew her participation from the research without completing a post-test, her pre-test responses were excluded from the results.

Reliability Testing

Cronbach's alpha was calculated from data gathered in this study in order to determine internal consistency of the instrument (Field, 2009). From the data collected at baseline, findings revealed a coefficient alpha ($n = 25$, $\alpha = .798$) for the survey. Analysis of post-test items revealed a coefficient alpha ($n = 25$, $\alpha = .809$) for the instrument. Analysis of both pre and post-test statements revealed a total coefficient alpha ($n = 50$, $\alpha = .895$). The values of .798, .809, and .895 are acceptable, indicating the stability and internal consistency of the instrument (Field, 2009).

Description of the Sample

Of the 52 participants, 30 (57.7%) were female, and 22 (42.3%) were male. Eleven participants (15.7%) were between the ages of 18-24, six (8.6%) between 25-34 years, seven (10%) between 35-44, 14 (20%) between 45-54, eight (11.4%) between 55-64, and six participants (8.6%) were 65 years old or older. Nine participants (17.3%) completed high school, 13 (25%) had some college experience, three (5.8%) earned an associate's degree, 11 (21.2%) had a bachelor's degree, and 15 (28.8%) had a graduate degree. Forty-nine participants (94.2%) were Caucasian, and two (3.8%) were African-American. One participant (1.9%) self-identified as mixed-ethnicity. Twenty-three participants (44.2%) were single and 19 (36.5%) had a marital status of married. Nine (17.3%) of the participants were divorced and one participant (1.9%) was widowed. Thirty-four participants (65.4%) had a friend or relative who was a police officer. Table 1 provides a visual presentation capturing the demography of the sample.

Table 1

Demographic Characteristics of the Participants

Characteristics	<i>n</i>	%
Gender		
Male	22	42.3
Female	30	57.7
Age		
18-24	11	21.2
25-34	6	11.5
35-44	7	13.5
45-54	14	26.9
55-64	8	15.4
65+	6	11.5
Education		
High School	9	17.3
Some College	13	25.0
Associate's Degree	3	5.8
Bachelor's Degree	11	21.2
Graduate Degree	15	28.8
Ethnicity		
Caucasian/White	49	94.2
African American	2	3.8
Other	1	1.9
Marital Status		
Single	23	44.2
Married	19	36.5
Widowed	1	1.9
Divorced	9	17.3
Friend/Relative in Law Enforcement		
Yes	34	65.4
No	18	34.6

Responses to the Measurements

Participants entered the FATS with some knowledge of police work ($M = 3.01$; $SD = 0.76$), generally positive attitudes toward police ($M = 2.03$; $SD = 0.91$), and a general willingness to cooperate with law enforcement. Interestingly, participants as a group thought their fellow citizen had less respect for the police ($M = 3.39$; $SD = 0.75$) than them, and that the media's portrayal of the police and their activities was slightly unfair/inaccurate ($M = 3.80$; $SD = 0.87$). The participants overwhelmingly believed police work to be both difficult ($M = 1.47$;

$SD = 0.80$) and dangerous ($M = 1.47$; $SD = 0.64$), while also being interesting ($M = 1.78$; $SD = 0.75$). Despite these preexisting, relatively favorable attitudes toward police and a self-reported willingness to cooperate with law enforcement, a comparison of pre- and post-test responses showed that participants completed the FATS event with additional police knowledge, more positive attitudes and beliefs, and an even greater willingness to assist law enforcement. There were no instances in which individual participant responses became more negative after encountering the FATS.

The research findings are presented in two tables, which are displayed below. The 25-line item statements have been thematically organized into two categories: attitudes toward police and self-reported willingness to act in cooperative ways. Lower mean ratings indicate stronger beliefs or more positive attitudes, with the exception being four items that reflect reversed scoring (police v. citizen confrontation, use of excessive force, and media portrayal of police). Tables 2 and 3 present the results of the paired-samples t -test for each item. A total of 19 items (76%) revealed statistically significant change ($p < .05$) from pre- to post-testing. Items marked with an asterisk denote significant difference at the $p < .05$ level.

Table 2

Attitudes Toward Police

Item	Pre-Test		Post-Test		<i>t</i> (50)	<i>p</i>	<i>Effect Size</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
Knowledge about police work	3.01	0.76	2.66	0.76	3.07	.003*	0.39
Overall attitude towards police	2.03	0.76	1.74	0.68	4.18	.000*	0.50
Other citizens' attitude toward police	3.39	0.75	3.35	0.79	0.44	.659	0.06
Difficulty of police work	1.47	0.80	1.25	0.56	2.52	.015	0.00
Dangerousness of police work	1.47	0.64	1.21	0.41	3.25	.002*	0.41
How interesting is police work?	1.78	0.75	1.66	0.68	1.42	.159	0.19
Amount of discretion police have	2.56	1.04	2.56	1.06	0.00	1.000	0.00
Confrontations due to police vs. citizen behavior	3.82	0.71	4.29	0.78	-4.98	.000*	0.57
Adequacy of police training	2.47	0.92	2.05	0.83	3.77	.000*	0.47
Likelihood of excessive force or abuse of authority	3.72	0.96	4.29	0.75	-6.05	.000*	0.65
Likelihood of excessive force or abuse of authority with minorities	3.45	1.20	3.94	0.92	-4.19	.000*	0.51
Media portray police fairly, accurately	3.80	0.87	4.11	0.86	-3.45	.001*	0.43

As illustrated in Table 2, participants' attitudes toward police all changed in police-positive ways following an educational encounter with the FATS.

Compared to their pre-test responses, participants believed that they had greater knowledge about police work (Before: $M = 3.01$, $SD = 0.76$; After: $M = 2.66$, $SD = 0.76$). This difference, -0.35, was significant $t(50) = 3.07$, $p = .003$, and represented a medium-sized effect, $d = 0.39$. Similarly, participants found that police work was more dangerous (Before: $M = 1.47$, $SD = 0.64$; After: $M = 1.21$, $SD = 0.41$). This change, -0.26, was significant $t(50) = 3.25$, $p = .002$, and

represented a medium effect size, $d = 0.41$. Participants also reported that police training was more adequate (Before: $M = 2.47$, $SD = 0.92$; After: $M = 2.05$, $SD = 0.83$) following their educational encounter with the simulator. The difference, -0.42 , was significant $t(50) = 3.77$, $p = .000$, and represented a medium-sized effect, $d = 0.47$. Participants' overall attitude towards police improved (Before: $M = 2.03$, $SD = 0.91$; After: $M = 1.74$, $SD = 0.68$), changing -0.29 following the simulation event. This was a significant finding $t(50) = 4.18$, $p = .000$, and represented a medium-sized effect, $d = 0.50$.

Additionally, compared to the pre-test, on the post-test the participants reported that they were less likely to believe that police officers use excessive force or abuse their authority with citizens (Before: $M = 3.72$, $SD = 0.96$; After: $M = 4.29$, $SD = 0.75$). This represents a significant difference (0.57), revealing $t(50) = 6.05$, $p = .000$, and represented a medium effect size, $d = 0.65$. With respect to law enforcement using excessive force or abusing authority with minorities, participants' attitudes also changed (Before: $M = 3.45$, $SD = 1.20$; After: $M = 3.94$, $SD = 0.92$). This difference, 0.49 , was significant $t(50) = -4.19$, $p = .000$, and represented a medium-sized effect, $d = 0.51$. Participants also conveyed that a confrontation between a police officer and a citizen was generally more the result of the citizen's behavior (Before: $M = 3.82$, $SD = 0.71$; After: $M = 4.29$, $SD = 0.78$). This difference, 0.47 , was significant $t(50) = -4.98$, $p = .000$, and represented a medium-sized effect, $d = 0.57$. Finally, participants also came to believe that the media portray police and their activities less fairly and less accurately (Before: $M = 3.80$, $SD = 0.87$; After: $M = 4.11$, $SD = 0.86$) following

the experiential learning encounter. This change, 0.31, was significant $t(50) = -3.45$, $p = .001$, and represented a medium-sized effect, $d = 0.43$.

Several survey items produced either no change, or only slightly-more positive views. Participants' beliefs about the amount of discretion that police officers have was the same in both pre- and post-test measurements (Before: $M = 2.56$, $SD = 1.04$; After: $M = 2.56$, $SD = 1.06$). Participants also reported that other citizens only have slightly more respect for the police (Before: $M = 3.39$, $SD = 0.75$; After: $M = 3.35$, $SD = 0.79$) following their experience with the simulator. Lastly, participants' opinions about how difficult (Before: $M = 1.47$, $SD = 0.80$; After: $M = 1.25$, $SD = 0.56$) and interesting (Before: $M = 1.78$, $SD = 0.75$; After: $M = 1.66$, $SD = 0.68$) police work to be only improved slightly, however pre-test data showed participants already believed police work to be both relatively difficult and interesting.

As illustrated in Table 3, the participants' self-predictions about the likelihood that they would engage in various cooperative behaviors if the opportunity presented itself also had significant positive change. Compared to their pre-test responses, after the educational encounter with the FATS, the participants said they would be more likely to report suspicious activity (Before: $M = 1.56$, $SD = 0.80$; After: $M = 1.29$, $SD = 0.57$). This difference, -0.27, was significant $t(50) = 3.44$, $p = .001$, and represented a medium-sized effect, $d = 0.43$. Similarly, participants' reported an increased likelihood to explain or defend police actions to other citizens (Before: $M = 1.98$, $SD = 1.00$; After: $M = 1.64$, $SD = 0.77$). The pre- and post-test change was -0.34, which was significant $t(50) =$

3.64, $p = .001$, and represented a medium-sized effect, $d = 0.45$. Participants also predicted a greater willingness to write a letter to the editor of a newspaper commenting on the police department or police activities (Before: $M = 3.27$, $SD = 1.37$; After: $M = 2.80$, $SD = 1.23$). This difference, -0.47 , was significant $t(50) = 3.82$, $p = .000$, and represented a medium effect size, $d = 0.47$. Participants also reported a greater disposition to contact police to make suggestions about community issues or problems (Before: $M = 2.82$, $SD = 1.24$; After: $M = 2.15$, $SD = 1.02$). This difference, -0.67 , was significant $t(50) = 5.11$, $p = .000$, and represented a medium-sized effect, $d = 0.58$.

Table 3

Self-Reported Willingness to Act in Cooperative Ways

Item	Pre-Test		Post-Test		<i>t</i> (50)	<i>p</i>	<i>Effect Size</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
Report suspicious activity	1.56	0.80	1.29	0.57	3.44	.001*	0.43
Provide information about a crime	1.39	0.72	1.21	0.57	2.63	.011*	0.34
Explain/defend police actions to other citizens	1.98	1.00	1.64	0.77	3.64	.001*	0.45
Contact police to make suggestions	2.82	1.24	2.15	1.02	5.11	.000*	0.58
Serve on an advisory board	3.15	1.40	2.68	1.27	3.55	.001*	0.44
Do fundraising	3.21	1.34	2.78	1.36	4.08	.000*	0.49
Serve as reserve officer	4.07	1.03	3.80	1.26	2.82	.007*	0.37
Do volunteer work	2.90	1.22	2.60	1.29	2.52	.015*	0.33
Participate in Neighborhood Watch	2.74	1.24	2.49	1.27	2.28	.026*	0.30
Attend educational presentations	2.23	1.05	1.88	1.05	3.39	.001*	0.43
Write to a newspaper	3.27	1.37	2.80	1.23	3.82	.000*	0.47
If you were 21 years old and about to make a career decision, would being a police officer interest you?	3.37	1.29	3.11	1.30	1.94	.057	0.26
How have others reacted to your attending the FATS community event?	2.06	0.79	2.06	0.81	0.00	1.00	0.00

Participants also became more willing to become involved with the operations of their local police department, reporting an increased likelihood that they would serve on an advisory board to the police department (Before: $M = 3.15$, $SD = 1.40$; After: $M = 2.68$, $SD = 1.27$). This difference, -0.47 , was significant $t(50) = 3.55$, $p = .001$, and represented a medium-sized effect, $d = 0.44$. Furthermore, participants conveyed a greater willingness to help with police fundraising efforts (Before: $M = 3.21$, $SD = 1.34$; After: $M = 2.78$, $SD = 1.36$), revealing a change of -0.43 , which was significant $t(50) = 4.08$, $p = .000$, and

represented a medium-sized effect, $d = 0.49$. Participants also indicated greater receptivity to attend educational presentations given by the police department (Before: $M = 2.23$, $SD = 1.05$; After: $M = 1.88$, $SD = 1.05$). This difference, -0.35 , was significant $t(50) = 3.39$, $p = .001$, and represented a medium-sized effect, $d = 0.43$.

Four additional items also revealed statistical significance in willingness to act in cooperative ways. Participants reported a greater willingness to provide information about a crime (Before: $M = 1.39$, $SD = 0.72$; After: $M = 1.21$, $SD = 0.57$), revealing a change of -0.18 , which was significant $t(50) = 2.63$, $p = .011$, and represented a medium-sized effect, $d = 0.34$. Participants indicated enhanced interest to serve as a reserve officer (Before: $M = 4.07$, $SD = 1.03$; After: $M = 3.80$, $SD = 1.26$). This difference, -0.27 , was significant $t(50) = 2.82$, $p = .007$, and represented a medium effect size, $d = 0.37$. An additional cooperative behavior was a self-reported willingness to engage in volunteer work (Before: $M = 2.90$, $SD = 1.22$; After: $M = 2.60$, $SD = 1.29$), a change of -0.30 , which was significant $t(50) = 2.52$, $p = .015$, and represented a medium-sized effect, $d = 0.33$. Finally, participants expressed a greater interest in participating in a neighborhood watch (Before: $M = 2.74$, $SD = 1.24$; After: $M = 2.49$, $SD = 1.27$). This difference, -0.25 , was significant $t(50) = 2.28$, $p = .026$, and represented a medium-sized effect, $d = 0.30$.

Analysis of Covariance

An analysis of the variables was conducted by utilizing an ANCOVA to compare the post-test mean item score with the corresponding baseline mean item

score. Two variables were identified as being statistically significant on three different item statements. A cross tabulation analysis was performed on the ANCOVA results for the variables of gender, and friends or relatives in law enforcement profession. The statistically significant results for these two variables are presented in two analyses of covariance tables below.

On item three, entitled “At this time, what is your overall attitude toward police officers in general?” female participant attitudes became significantly more positive towards law enforcement following the completion of the FATS community event. Male participants’ attitudes saw less change and responses remained fairly consistent. The covariate, gender, was significantly related to participant overall attitude towards law enforcement $F(1, 51) = 66.90, p = .028$. An examination of the pre-test measurements revealed that “neutral” ($n = 13$) or “negative” ($n = 3$) attitudes toward police accounted for 30.8% of participants’ responses, while 69.2% reported “positive” ($n = 19$) or “very positive” ($n = 17$) attitudes about police. Post-test responses improved significantly, as all negative responses were completely eliminated in both male and female participant surveys. A total of seven (13.7%) participants rated their post-test attitudes as “neutral”, while the remaining 86.3% of responses were either “positive” ($n = 24$, 48.3%) or “very positive” ($n = 20$, 39.2%).

Table 4

Analysis of Covariance Results for Gender

Item	Male				Female				<i>F</i> (1,51)	<i>p</i>
	Pre-Test		Post-Test		Pre-Test		Post-Test			
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Overall attitude towards police	2.09	0.81	1.90	0.75	2.00	1.00	1.62	0.62	66.90	.028

Two item statements revealed statistically significant change between pre- and post-test measurements on the variable of whether the participant had a friend or family member in the law enforcement profession. On item 17, participants self-reported how likely they would be to explain or defend police actions to other citizens. The covariate, friend or family in law enforcement, was significantly related to participant likelihood to defend or explain law enforcement actions, $F(1, 51) = 38.09, p = .050$. Thirty-three participants (64.7%) reported they had a friend or family member in the law enforcement profession and 76.5% of those cohort members reported on the pre-test that they would either “very likely” ($n = 16, 47.1\%$) or “likely” ($n = 10, 29.4\%$) explain or defend police actions to other citizens. A post-test comparison showed that those with a friend or family member in the law enforcement profession became much more likely (90.9%) to explain or defend police actions to other citizens following the FATS community event. Further analysis revealed an elimination of all responses of “unlikely” ($n = 3, 5.8\%$) and “not at all likely” ($n = 1, 1.9\%$) from the pre-test data from both cohorts.

The second item statement with statistical significance dependent upon whether the participant had a friend or relative in the law enforcement profession was item 25. Participants were asked to rate how likely they would be to write a letter to the editor of a newspaper commenting on the police department or police activities. This covariate was significantly related to the action of writing a letter to the editor, $F(1, 51) = 42.24, p = .039$. It was revealed through the pre-test data that 51.9% of all participants self-reported they were either “unlikely” ($n = 15,$

28.8%) or “not at all likely” ($n = 12$, 23.1%) to write a letter to the editor regarding the police and their activities. A comparison of post-test responses showed a significant overall change, and even greater positive responses by those with a friend or relative in the law enforcement profession. Overall post-test data revealed that 29.4% of all participants self-reported they were either “unlikely” ($n = 10$, 19.6%) or “not at all likely” ($n = 5$, 9.8%) to write a letter to the editor regarding the police and their activities following the FATS, an improvement of 22.5%. There was a significant increase amongst those with a friend or family member in the law enforcement profession, with pre-test respondents who answered “likely” increasing to 33.5% ($n = 12$) compared to the baseline of 17.9% ($n = 7$).

Table 5

Analysis of Covariance Results for Friend or Relative in Law Enforcement

Item	<u>Friend or Relative in Law Enforcement</u>				<u>No Friend or Relative in Law Enforcement</u>				$F(1,51)$	p
	<u>Pre-Test</u>		<u>Post-Test</u>		<u>Pre-Test</u>		<u>Post-Test</u>			
	M	SD	M	SD	M	SD	M	SD		
Explain/defend police actions to other citizens	1.81	1.01	1.45	0.66	2.27	0.95	2.00	0.84	38.09	.050
Write to a newspaper	2.90	1.37	2.39	1.02	3.94	1.10	3.55	1.24	42.24	.039

CHAPTER V

DISCUSSION

Summary

The primary purpose of this research study was to measure the changes in citizens' attitudes toward police as a result of their participation in a high-fidelity

deadly force police training simulation. Using the novel approach of high-fidelity simulation, this study contributes to the literature as no prior research employed this instructional approach with the civilian populace. It was hypothesized that members of the Southern Maine Interest Group (SMIG) would experience a favorable change in attitudes toward police following an educational encounter with the Firearms Training Simulator (FATS). Paired samples *t*-test ($N = 51$) revealed 19 of the 25 items with statistically significant results. Twenty-three of the 25 items moved in a positive direction, with two items having no change. Therefore, the hypothesis is supported.

Strengths and Limitations of the Current Study

This study attempted to add to the sparse data available on effective strategies in changing citizens' attitudes toward police. While numerous researchers have examined the subject, a majority of the evidence presented in the literature on attitude change has been anecdotal. This study was able to assess a change in citizens' attitudes toward police through empirical evidence, an approach very few studies have been able to demonstrate.

The current study has several additional strengths. Civilian participants had the unique opportunity to experience a high-fidelity police deadly force training simulator, attributable in part to the generous working relationship with KU. Second, this study utilized a valid and reliable Likert-scale instrument that was identified from the review of the literature and used with permission from the instrument author. The researcher for this study was also a certified and knowledgeable police officer, which likely added to the veracity of the classroom

pre-presentation and the quality of the debrief discussions about law enforcement's use of force.

Although this research contributes several notable insights on the impact of high-fidelity simulation on citizens' attitudes toward police, it is not without limitations. A major limitation is the use of a self-report survey instrument. As Brewster et al. (2005) conveyed, self-reported willingness to do an activity may not be correlated with actual behavior. Limitations also exist with respect to the participant population that comprised this study. The participant group was racially homogenous, with Caucasians accounting for 94.2% ($n = 49$) of all respondents. This study also included a very well educated participant group, with 80.7% ($n = 42$) having at least some college experience and 26 participants (50%) having either a bachelor's or graduate degree. Lastly, a majority of the participants were predisposed to favorable impressions of the police, as can be seen by their pre-test ratings of their overall attitude toward police (see Table 2). This same limitation was present in the study conducted by Brewster et al. (2005), and these favorable impressions may not be representative of the average citizen. This is evidenced in the fact that participants self-reported that they believed they had more respect for police than their average citizen does (see Table 2, item three). Lastly, this study was comprised of 52 participants in a small geographic location in the Northeast of the United States. A larger participant pool with more diverse backgrounds would likely produce more varied research results.

Impact of Experiential Learning

A review of the literature on high-fidelity simulation revealed that this teaching strategy has been an effective technique for over 70 years. The airline industry pioneered the use of simulation when flight simulation became mandated for all commercial and military pilots. The use of a simulator allowed pilots to gain experience in managing dangerous events in a safe and controlled environment (Hyland & Hawkins, 2009). These same learning principles have been utilized extensively by several other industries, namely the medical professions and the military. These industries, like many others, have found practical application of skill development and situational awareness through simulation in their respective teaching curriculums. According to VanGele (2009), cognitive research has revealed that learning is not necessarily an outcome of teaching. Teachers can present a quantity of information, but effective learning is about the quality of students' understanding. VanGele (2009) argued that students understand well only what they practice doing, and simulation provides opportunity for real-life engagement and active practice.

In recent history, the law enforcement profession has also discovered the benefits of simulation. Police personnel are utilizing high-fidelity deadly force judgment simulators as a training instrument for certified officers and new hires. These same training tools were successfully implemented in this study with civilian participants.

Accordingly, the findings of this study suggest that the FATS did in fact create real-life, high-fidelity scenarios that resulted in impactful experiential learning opportunities for members of the SMIG. These experiences translated

into improved post-simulator perceptions of the police and a self-reported greater willingness to cooperate with law enforcement. This is an important finding, as positive experiences with law enforcement promote community relationships and can lead to enhanced attitudes toward police.

Support of the Literature

This research corroborates many of the preceding studies on the effectiveness of high-fidelity simulation as an impactful learning tool. The FATS was able to reproduce environments that mimicked real conditions by integrating visual, auditory, and tactile elements as part of the participants' learning experience. These elements, when combined, allowed for a powerful educational encounter regarding the police and their decision on the use of deadly force. A comparison of the participants' pre- and post-test data showed that a totality of the FATS community event (classroom and simulation) resulted in improved attitudes toward police and a greater willingness to assist the police and their activities.

Further, these findings validate the work of Brewster et al. (2005), whose research design and survey instrument were incorporated for this research study. Like with Brewster et al. (2005), there were no instances or items on which participants' rating of their attitudes or behavior changed in an unintended direction (i.e. becoming more negative toward police). These findings are overwhelmingly positive for police and police practitioners, as it is suggested that community engagement through mediums like Citizen Police Academies or educational presentations about law enforcement's use of force can result in improved attitudes and beliefs about police.

Lowering Social Distance

The concept of lowering social distance, also known as community policing, is a well-documented approach to law enforcement. The literature clearly acknowledges the potential benefits in impacting citizens' attitudes toward police through community policing engagement. This approach promotes building collaborative police-citizen partnerships to address community problems. Instead of playing a passive role, citizens actively partner with local law enforcement to improve neighborhood conditions (Reisig, 2010). The findings of this study advance and reaffirm police and citizen interaction, thereby humanizing the police professional and lowering the social distance between citizens and members of law enforcement.

It is important for law enforcement officials to remain mindful that individual police-citizen contact(s) play a vital role in the overall development of citizens' perceptions of the police. Proactive and positive contacts, rather than just targeted enforcement action (e.g. traffic stops), are influential in cultivating citizens' attitudes toward police. Lee and Gibbs (2015) remind police practitioners that lowering the social distance between citizens and the police is important because "the average law-abiding citizen would expect to have no contact with the police, rendering citizen-police encounters more ominous than amicable" (p. 321). By engaging members of the community through constructive interaction, like demonstrated in this research study and in the work of Brewster et al. (2005), law enforcement officials and citizens become familiarized with one another. This familiarization is important on several levels, as the literature shows

it leads to an increased likelihood of improved police perceptions and cooperation from citizens. This is an impactful benefit for all parties. According to Lee and Gibbs (2015) when the public regards their police service favorably, they are likely to abide by the law and police directives (Lee & Gibbs, 2015). Further, police officers who believe citizens view them favorably have higher job satisfaction, which may affect their job performance (Lee & Gibbs, 2015). Therefore, it reasons that when citizens develop favorable relationships with their local police, it makes police work both easier and more effective.

Results presented in this study also suggest that having a friend or family member in the law enforcement profession may significantly impact how individual citizens view the police, and also influence how likely a citizen would be to publically defend police actions with fellow citizens and media members. When a person has a friend or family member in the police force, the social distance between that individual and law enforcement is lessened. By reducing that distance – even if a citizen simply feels he or she “knows” a police officer – confidence in the police is raised despite alleged negative contacts and negative media coverage (Lee & Gibbs, 2015). This is the principal concept to “humanizing” the police professional, as it provides a point of reference to the average citizen as they formulate their own perception of the police.

Implications and Future Research

The findings from this thesis support lowering the social distance between citizens and police through various community models for law enforcement engagement. The results of this study uphold and advance the importance for

police personnel to be visible and well-engaged in their respective communities. Further, police practitioners should be identifying mediums for proactive and positive opportunities to interact with members of the public, rather than having those contacts limited to just targeted enforcement action. Lastly, this thesis supports active learning strategies, such as the FATS, as impactful experiential learning tools to assist in forming more positive relationships between the police and the citizens they serve.

The results of this study also suggest a number of future directions for research in identifying effective strategies to improve citizens' attitudes toward police. Due to the relatively small sample size in the current study, the literature would benefit from a study with a larger sample size to investigate the effectiveness of the FATS in changing citizens' attitudes toward police. Furthermore, because the participants in the current study were predisposed to relatively favorable impressions of the police, more research is needed that includes persons with fairly negative beliefs about law enforcement. Lastly, the literature would benefit from a longitudinal study of civilian participants that attended constructive police community events, such as the FATS or Citizen Police Academies, to assess the long-term effectiveness of these programs. A longitudinal study would also be able to measure whether a participants' self-reported willingness to act in cooperative ways was representative of their real world action following the educational event.

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Appendix A

University of Southern Maine Thesis Title Page

Effectiveness of High-Fidelity Simulation in Changing Citizens' Attitudes

Toward Police

A THESIS

SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS

FOR THE DEGREE OF MASTER OF ARTS IN LEADERSHIP STUDIES

UNIVERSITY OF SOUTHERN MAINE

BY

Jeffrey A. Pardue


2016

FINAL APPROVAL FORM

THE UNIVERSITY OF SOUTHERN MAINE


May 6, 2016

We hereby recommend that the thesis of Jeffrey A. Pardue entitled *Effectiveness of High-Fidelity Simulation in Changing Citizens' Attitudes Toward Police* be accepted in partial fulfillment of the requirements for the Degree of Master of Leadership Studies.

_____
Advisor

_____
Director

Accepted

_____
Dean, Lewiston-Auburn College

Appendix C
Firearms Training Simulator Consent Form

You are being asked to take part in a research study about citizens' attitudes toward the police. Please read this form carefully and ask any questions you may have before agreeing to take part in the study.

What the study is about: The purpose of this study is to evaluate citizens' attitudes toward the police both before and after a simulated experiential police use of force training scenario.

What we will ask you to do: If you agree to be in this study, you will be presented a brief overview of Federal (US) and State (ME) case law regarding the use of deadly force by law enforcement. You will then assume the role of a law enforcement officer and respond to a series of simulated police calls for service utilizing a police firearms training simulator. A short debrief will be conducted where you can discuss the experience, followed by a survey questionnaire.

Risks and benefits:

There is the risk that you may find some of the simulated scenarios as potentially stress-inducing. You may experience an increased heart rate while interacting with the simulator.

There are no benefits to you. It is my hope that programs such as this will allow law enforcement officials to find additional ways to connect with, and better serve, the members of their community.

Compensation: There is no compensation for participating in this study.

Your answers will be confidential. The records of this study will be kept private. In any sort of report we make public we will not include any information that will make it possible to identify you. Research records will be kept in a locked file; only the researcher will have access to the records.

Taking part is voluntary: Taking part in this study is completely voluntary. You may skip any questions that you do not want to answer. If you decide not to take part or to skip some of the questions, it will not affect your current or future relationship with the Falmouth (or any other) Police Department. If you do not wish to participate in simulated police scenarios, you are welcome to watch in a designated spectator area.

If you have questions: The researcher conducting this study is Detective Jeffrey Pardue of the Falmouth Police Department. Please ask any questions you have now. If you have questions later, you may contact Det. Pardue at jpardue@falmouthme.org or at 207-781-2300. If you have any questions or concerns regarding your rights as a subject in this study, you may contact the University of Southern Maine Office of Research Integrity and Outreach (ORIO) at usmorio@usm.maine.edu or 207-780-4517.

Statement of Consent: I have read the above information, and have received answers to any questions I asked. I consent to take part in the study.

Your Signature _____ Date _____

Your Name (printed) _____

Signature of person obtaining consent _____ Date _____

Printed name of person obtaining consent _____ Date _____

Very positive Very negative

1 2 3 4 5

15. How likely would you be to engage in each of the following activities at this time, if the opportunity presented itself? (By providing this information, you are NOT obligating yourself to do any of these activities.)

To report suspicious activity to the police?

Very likely				Not at all likely
1	2	3	4	5

To provide police with information that you have about a crime?

Very likely				Not at all likely
1	2	3	4	5

To explain or defend police actions to other citizens?

Very likely				Not at all likely
1	2	3	4	5

To contact the police department to make suggestions about a community issue or problem?

Very likely				Not at all likely
1	2	3	4	5

To serve on an advisory board to the police department?

Very likely				Not at all likely
1	2	3	4	5

To do fundraising for the police department?

Very likely				Not at all likely
1	2	3	4	5

To serve as a reserve officer?

Very likely				Not at all likely
1	2	3	4	5

To do other volunteer work for the police department?

Very likely				Not at all likely
1	2	3	4	5

To participate in Neighborhood Watch?

Very likely				Not at all likely
1	2	3	4	5

To attend educational presentations given by the Police Department (safety lectures, etc.)?

Very likely				Not at all likely
1	2	3	4	5

To write a letter to the editor of the newspaper commenting on the Police Department or police activities?

Very likely				Not at all likely
1	2	3	4	5

16. What do you think will be the most valuable thing you will get out of attending the FATS community event? (please be as specific as possible)

17. How have other people in general reacted to your planning to attend the FATS community event?

Very positively					Very negatively
1	2	3	4		5

18. If you were 21 years old, and about to make a decision as to what career you would like to pursue, would you be interested in being a police officer?

Very interested					Not at all
interested	1	2	3	4	5

Appendix E
**PARTICIPANTS OF THE
 FIREARMS TRAINING SIMULATOR (FATS) STUDY**
Post-Test

Thank you for your participation in this study. This survey is designed to determine how much you know about police work and how you feel about police in general after participating in the FATS community event. By responding to the survey, you will be helping us to evaluate the impact of the FATS on you, and on the community.

Please do not put your name on the survey. A random participant number has been assigned to you for statistical analysis purposes. Please make sure your "Pre-Test" and "Post-Test" participant numbers are the same. Your responses will be kept **confidential**, and you will not be identified in any verbal or written reports of this study.

Please answer each question as honestly as possible. When answering the questions, **think about ALL of your interactions with police officers**, both in Southern Maine and in other locations.

Participant Number: _____

Date of FATS event: _____

1. What was your favorite topic or activity of the FATS community event?

2. How much knowledge do you believe that you currently have about police work? (please circle the appropriate number on the scale)

A great deal of knowledge

Very little knowledge

1 2 3 4 5

3. At this time, what is your overall attitude toward police officers in general?

Very positive

Very negative

1 2 3 4 5

4. How much respect do you think **other citizens** in general have for police officers?

A great deal of respect

Very little respect

1 2 3 4 5

5. How **difficult** do you believe police work to be **overall**?

Very difficult

Not very difficult

1 2 3 4 5

6. How **dangerous** do you believe police work to be **overall**?

Very dangerous

Not very dangerous

1 2 3 4 5

7. How **interesting** do you believe police work to be **overall**?

Very interesting Not very interesting

1 2 3 4 5

8. How much discretion do you believe that police officers have in handling situations as they see fit?

A great deal of discretion Very little discretion

1 2 3 4 5

9. If a situation between a police officer and a citizen becomes confrontational, is it usually more the result of the police officer's behavior, or the citizen's behavior?

More the police officer More the citizen

1 2 3 4 5

10. How adequate is the training of police officers in general?

Very adequate Not at all adequate

1 2 3 4 5

11. How often do you believe that police officers **in general** use excessive force or abuse their authority with citizens?

Very often Rarely

1 2 3 4 5

12. How often do you believe that police officers **in general** use excessive force or abuse their authority with minorities?

Very often Rarely

1 2 3 4 5

13. How fairly and accurately do you think the media portray police and their activities?

Very fairly/accurately Very unfairly/inaccurately

1 2 3 4 5

14. Please place a check mark beside any of the following ways in which you would now consider providing assistance to the police. (By providing this information, you are **NOT** obligating yourself to do any of these activities)

<input type="checkbox"/> Report suspicious activities	<input type="checkbox"/> Provide information about a crime
<input type="checkbox"/> Make suggestions	<input type="checkbox"/> Serve on a citizens' advisory board
<input type="checkbox"/> Serve as a Reserve Officer	<input type="checkbox"/> Explain police work to other citizens
<input type="checkbox"/> Do fundraising for a police department	<input type="checkbox"/> Do other volunteer work
<input type="checkbox"/> Other (please specify below)	<input type="checkbox"/> Participate in Neighborhood Watch

What do you think was the most valuable thing you got out of attending the FATS community event? (please be as specific as possible)

15. How have other people in general reacted to your attending the FATS community event?
 Very positively Very negatively

1 2 3 4 5

16. How curious do you think people in general will be about what you have learned while attending the FATS community event?
 Very curious Not at all curious

1 2 3 4 5

17. How likely would you be to recommend the FATS community event to a friend or relative?
 Very likely Not at all likely

1 2 3 4 5

18. How likely would you be to engage in each of the following activities at this time, if the opportunity presented itself? (By providing this information, you are **NOT** obligating yourself to do any of these activities.)

To report suspicious activity to the police?
 Very likely Not at all likely

1 2 3 4 5

To provide police with information that you have about a crime?
 Very likely Not at all likely

1 2 3 4 5

To explain or defend police actions to other citizens?
 Very likely Not at all likely

1 2 3 4 5

To contact the police department to make suggestions about a community issue or problem?
 Very likely Not at all likely

1 2 3 4 5

To serve on an advisory board to the police department?
 Very likely Not at all likely

1 2 3 4 5

To do fundraising for the police department?
 Very likely Not at all likely

1 2 3 4 5

To serve as a reserve officer?

Very likely

Not at all likely

1

2

3

4

5

To do other volunteer work for the police department?

Very likely

Not at all likely

1

2

3

4

5

To participate in Neighborhood Watch?

Very likely

Not at all likely

1

2

3

4

5

To attend educational presentations given by the Police Department (safety lectures, etc.)?

Very likely

Not at all likely

1

2

3

4

5

To write a letter to the editor of the newspaper commenting on the Police Department or police activities?

Very likely

Not at all likely

1

2

3

4

5

19. If you were 21 years old, and about to make a decision as to what career you would like to pursue, would you be interested in being a police officer?

Very interested

Not at all interested

1

2

3

4

5

Why or why not?

Thank you for participating in this project. If you have additional comments about your experience with this Firearms Training Simulator event, please write them below. Your feedback will be used to improve the program for future participants.

Appendix F

Brewster et al. (2005) Survey Instrument Approval

Jeffrey Pardue

From: Brewster, Jo Anne - brewstja <brewstja@jmu.edu>
Sent: Wednesday, June 17, 2015 3:36 PM
To: Jeffrey Pardue
Subject: RE: Effectiveness of citizen police academies in changing the attitudes, beliefs, and behavior of citizen participants
Attachments: Backup of SURVEY2CurrentPreTest.wbk; Backup of SURVEY3CurrentPostTest.wbk

Hi Jeff. I finally located the pre- and post-tests that we used in that study (at least I think I found the correct versions). They are attached. I'd love to hear about your results.
JoAnne

JoAnne Brewster, Ph.D., ABPP
Board Certified in Police & Public Safety Psychology

Secretary and Membership Chair
Society for Police and Criminal Psychology

Professor, Department of Graduate Psychology MSC 7704, Miller 1151 James Madison University Harrisonburg,
VA 22807
540 568-6107
brewstja@jmu.edu

-----Original Message-----

From: Jeffrey Pardue [<mailto:jpardue@falmouthme.org>]
Sent: Saturday, May 30, 2015 3:50 PM
To: Brewster, Jo Anne - brewstja
Subject: RE: Effectiveness of citizen police academies in changing the attitudes, beliefs, and behavior of citizen participants

Thanks, JoAnne. Enjoy your travels!

Jeff

Detective Jeffrey Pardue
Falmouth Police Department
2 Marshall Drive
Falmouth, ME 04105
jpardue@falmouthme.org
(P)207-781-2300
(F)207-781-3448

-----Original Message-----

From: Brewster, Jo Anne - brewstja [<mailto:brewstja@jmu.edu>]
Sent: Saturday, May 30, 2015 3:49 PM
To: Jeffrey Pardue

Subject: Re: Effectiveness of citizen police academies in changing the attitudes, beliefs, and behavior of citizen participants

Sorry for delay, traveling, will return June 15 and will see if I still have the survey saved somewhere.
JoAnne

Sent from my iPhone

On May 24, 2015, at 1:42 PM, "Jeffrey Pardue" <jpardue@falmouthme.org> wrote:

> Dear Dr. Brewster,

>

> My name is Jeff Pardue and I am a Detective with the Falmouth (ME) Police Department. I am currently working towards my masters degree and I am drafting my research proposal for my senior thesis capstone study. For my study, I have partnered with a local Kaplan University to use their Firearms Training Simulator (FATS), where I plan on exposing civilian participants to the use of police deadly force simulated situations.

>

> I am looking to measure, through a pre and post test, whether participant's attitudes towards the police change after an educational encounter with the FATS. I have read your study on the effectiveness of citizen police academies in changing the attitudes, beliefs, and behavior of citizen participants. Is there any chance you'd be willing to share the instrument survey that you used in your research so I can implement it in my study? It appears in table 1 of your article that the measurable items are exactly what I want to review. Also, if you have any validity studies regarding the instrument i'd be extremely grateful. Thank you in advance for your time and thoughtful consideration.

>

> Sincerely,

>

> Jeff Pardue

>

> -----

> Detective Jeffrey Pardue

> Falmouth Police Department

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> Falmouth, Maine 04105

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