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Understanding Police Decision-making with Firearms: From Training to Real-life Deployment

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Abstract

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Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

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Abstract

Modern efforts involving police reform have created a need for police administrators and policymakers to address various elements of policing. Administrative and punitive policy reforms have had little effect on decreasing police shootings. The purpose of this phenomenological study is to understand the experiences of officers who have been involved in deadly force encounters in order to identify where their past training methods led to success or failures in real-life situations. The theoretical framework for this study was Janis and Mann's conflict model of decision-making. This study involved answering the question: From the perspectives of police officers involved in shootings, what elements of training influenced their decision-making in real-life deadly force encounters? Data were collected using researcher-developed questions in virtual or face-to-face settings. Participants included 16 officers who have been involved in real-life shootings in a particular area identified in this study as a Rocky Mountain region for security purposes. This study found that agencies are failing to use the most proven methods for preparing their officers for real-life encounters in the most effective manner. Institutionalized practice of agencies to use marksmanship-based testing has failed to prepare officers to deal with decision-making under high stress situations. Findings show policing agencies must adopt training policies and emphasize cognitive training which will lead to officers who can make good decisions under stress. Implications for social change will be improved firearms training policies, leading to improved decision making by officers in an effort to decrease police shootings.

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Dedication

I would like to dedicate this to my wife Amy and my children, Jordon, Alexandra, and Arabelle who gave me the support and drive to complete my PhD.

I would also like to dedicate this to all those law enforcement professionals who have given the ultimate sacrifice in service of others, and those who will make these sacrifices in the future.

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I would like to acknowledge my family for sticking with through this. I would also like to acknowledge all the staff and faculty at Walden University for their help and support, especially my Chair, Dr. Karel Kurst-Swanger and my Second, Dr. Julian Muhammad for contributing to my success in this endeavor, especially through the most difficult part of this journey.

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Chapter 1: Introduction to the Study

Police in the United States are consistently asked to work in environments where they are expected to make quick and multifaceted decisions with little information, with the cost of failure being the loss of their life, the life of someone else, and legal and internal disciplinary issues that accompany use of force (Brewster et al., 2016). These decisions are further clouded by little or inaccurate information, laws, and policies which must be properly applied in unique ways and environmental factors. Most officers are able to perform their duties with honesty and integrity, and many never have to deploy their weapons or use deadly force (Austin & Callen, 2018). Other times, officers must deploy their weapons to protect their own life or the lives of others, relying on their experience and training to make immediate decisions.

With so many factors to consider in these circumstances, decisions officers make are not always optimal, leading to the use of deadly force, which may not be the best choice for the situation, or may be applied in a way that led to less than desirable outcomes. When a police shooting is questionable, overall community trust in the police dwindles and creates an environment where citizens feel oppressed, resulting in dissatisfaction and calls for social justice. The typical means to correct an officer's actions is through policies, or in more extreme cases, legislative reform rather than addressing why officers are responding a certain way (Engel et al., 2020).

In Colorado, Senate Bill 20-217 (SB217) exemplifies efforts to create reform through legislation without addressing why officers make the decisions they do. The bill, which was implemented in 2020, was a result of police reform efforts at the national

level, due to George Floyd's death at the hands of Minneapolis police, and was
recognized as a first of its kind bill nationwide. Key factors in this bill include
decertification of officers for lying and mandatory statewide implementation of body
cameras, clarification of when officers can use force, and decertification of officers (H.B.
Rep. No. 1309.01, 2020). The creation of this bill was done without input from law
enforcement leaders or even experts in the field.

For SB217, there are no mandates to improve training or increase the number of
training hours needed for certification, or ways to improve officers' performance. The
focus was on catching officers doing wrong and addressing integrity and accountability.
Engel et al. (2020) identified five key areas agencies should improve to decrease police
shootings: body cameras, de-escalation, implicit bias training, civilian oversight, and
early intervention systems for officers using force. This study indicated a need by
researchers and policymakers for more research to be done to determine whether they
have any impact on decreasing police use of force or shootings.

Zimring (2020) said police killings are higher in the United States than in other
countries because police are four or five times more likely to be killed themselves when
compared to other western countries, such as those in Europe, Canada, and others similar
to the US. The focus has been mainly on the criminal prosecution of officers or
administrative efforts, such as policy changes, which have had little effect on decreasing
police shootings (Zimring, 2020). Police reform cannot have a meaningful impact if
policy changes that involve implementing training or restrictions in terms of what officers

can do are based on public pressure rather than evidence-based research (Braga et al., 2017).

Police shootings remain consistent annually, without major decreases resulting from any identified police reform policies. Police shootings vary by year, with 999 fatal shootings in 2019, 1,021 fatal shootings in 2020, and 1,055 fatal shootings in 2021 (Federal Bureau of Investigation [FBI], 2022). During these years, police reform efforts existed nationally involving accountability and limitations to police use of force (Engel et al., 2020). As of October 2021 in Colorado, there have been 47 police shootings in 2021, resulting in 19 deaths (CRS [Colorado Radio Staff], 2021). Even with the introduction of House Bill 217, the average number of police shootings in this area has not decreased in Colorado, with an average of 30 police shootings between 2015 and 2017, jumping to an average of 35 leading into 2021 (Summers, 2021).

Legislation and administrative efforts can only impact choices an officer makes so much. It is important to further explore police training and how it can lead officers toward making good or bad decisions during real-life deadly force encounters. Training is a challenge for police agencies due to time, manpower, and funding limitations. Due to this, training is typically lacking and requires minimum qualifications, passing a marksmanship-based qualification, for state or agency requirements as set by the particular legislating entity for any particular agency in the region of the study.

Police training involving use of force is typically more focused on technique than cognitive aspects such as decision-making. Arrest control training typically involves practicing takedowns, striking, handcuffing, and physical techniques. Firearms training

for police agencies in the region of the study involves marksmanship training and maintaining officers' abilities to qualify, not on creating better decision-making. Training involving the use of less lethal options, such as bean bag rounds for shotguns or tasers is done with little frequency and lacks quality, due to only involving certifying officers to carry and deploy the devices (Augustine, 2020; Beasely, 2020).

Application of scenario-based training in combination with skills training has been shown to be more effective than marksmanship training to activate cognitive decision-making in officers than any other training (Clark & Mayer, 2009). For agencies in the region of study, scenario-based training is implemented with little frequency, involves unrealistic and repetitive scenarios, and most importantly, has little or no corrective training that is required for those who perform poorly. For police training, more adequate and meaningful than marksmanship training occurs when training is grounded in realistic circumstances officers may encounter (Poos et al., 2017). The first aspect of training grounded in realism for deadly force encounters is consideration of stress officers are under during combat situations and recreating this stress in training. The second aspect of creating realistic training is consideration of decision-making processes officers go through under stress and how these affect outcomes. Lastly, training needs to have measurable elements of the job-related tasks based in reality to determine if officers are truly prepared to deal with a real use of force encounter. This study involved identifying elements of training that officers applied in shootings to help identify how training led to better decision-making.

This study, through the use of semi-structured interviews, involved examining lived experience of police officers in the region of study who have been involved in shootings to gain an understanding of how their training influenced their decision-making. This study is significant when considering meaningful policy decisions for police administrators focused on training policies which may have a positive impact in terms of decreasing police shootings by focusing on better decision-making. Decreasing shootings can lead to better relationships between police and citizens. Considerable attention has been given to police shootings and police reform resulting from high-profile shootings by the media, scholars, citizens, and legislators, with an emphasis on decreasing police shootings. This often leads to hasty reactions and implementation of training that has not proven to be effective and takes crucial time away from other training.

Chapter 1 includes background information and influencing factors that have driven police reform. I also provide a more in-depth look at the purpose of the study which was to examine the experiences of police officers to gain an understanding of past training methods which led to successes or failures in real-life situations. I used Janis and Mann's conflict model of decision-making as a theoretical framework. Research questions were developed to help identify how training affects decision-making under stress. Research questions helped in terms of exploring the experiences of officers to understand what areas of training influenced their decision-making.

The study was delimited to police agencies in a particular urban county in the Rocky Mountain region of the United States, which is representative of midsize urban

and rural agencies throughout the United States in terms of agency size, population, crime rates, and the number of officer-involved shootings.

Background

Law enforcement reform has been an evolving topic. Negative public opinions of law enforcement and dissatisfaction with service have led to public policy changes, particularly involving police use of force. It is common for both citizens and police administrators to address use of force issues and present evidence of increases or declines in incidents based on policy changes. With 999 police shootings in 2019, of which 60% involved perpetrators who were unarmed or armed with something other than a firearm (FBI, 2020), legislative policy reforms have had little effect on decreasing police shootings (Jennings & Rubado, 2017; Sherman, 2020). Other efforts involving de-escalation training, co-responder programs to deal with the mentally ill, and legislative methods of police reform have still not had any measurable impact on the number of police shootings (Abrams, 2020). Police policymakers nationwide are looking for alternative methods to effect meaningful police reforms, with one goal being a decrease in the number of police shootings each year.

This study was focused on policing agencies in, for security reasons, an area which will be referred to as a Rocky Mountain region or region of study, an urban region which includes nine incorporated cities or towns under the jurisdiction of one Sheriff's Office and has a population of over 500,000 people. In comparison to the rest of the nation, the region is a mid-sized urban area with police agencies ranging from mid-sized to small. Law enforcement reform in the region of this study has been heavily influenced

by state and federal guidelines applicable to the region of study. Its closest large metropolitan area is the Denver metro area.

There have been many high-profile shootings in the region of this study, with 309 shootings between 2014 and 2020, 189 of which ended fatally; this area is in the top five in the nation for officer-involved shootings based on population (FBI, 2020). To understand police reform issues in this region, there must be an examination of more controversial shootings which have caused public outcry.

In 2003, Paul Childs, a developmentally challenged 15-year-old, was shot by police after his family called for help. The officer was ultimately found innocent of wrongdoing, but the city of Denver paid out a sum of money in a lawsuit, and several changes were made to Denver's use of force policy, including the purchase and increased implementation of tasers and training involving dealing with those with disabilities (Silverstein, 2011). In 2004, Frank Lobato, a 63-year-old man, was shot by police during a raid looking for Mr. Lobato's nephew. Mr. Lobato was shot by police while holding a soda can which was mistaken for a weapon. In 2014, Ryan Ronquillo was shot by officers attempting to serve an arrest warrant. When Ronquillo attempted to flee in his vehicle, he struck a female officer and was subsequently shot. Ronquillo was otherwise unarmed. In 2015, Naeschylus Carter-Vinzant was shot by Aurora Police. He was shot when he removed his hand from his pocket in a manner that appeared as if he was removing a gun from his pocket, although he was unarmed (Phillips, 2020).

These instances illustrate a continued trend of incidents followed by an attempt to correct issues through policy reforms. Ultimately, incidents continue to occur in this

region and nationally. While there are bad police who intentionally commit illegal and immoral acts, this is a small percentage (Walker et al., 2001). In these incidents, issues that led to tragic outcomes were not attributed to officers intentionally committing malicious acts, but rather making quick decisions under stress which are not optimal and result in undesirable outcomes. While not all police shootings can be avoided, shootings that are attributed to poor decision-making due to inadequate training policies may be improved.

Better decision-making involving deadly force encounters may result in a decrease in shootings due to alternative decisions being made by officers. The more adequate firearms training is, the greater the chances of more adequate application of use of firearms by officers. From a policy standpoint, individual police agency policies dictate how an individual police agencies tests whether its officers are fit to deploy their firearms.

In terms of cost and time, qualification testing for firearms is a more attractive option for police agency heads as it is much less time-consuming and easier to prepare officers to pass a marksmanship-based test than other cognitive forms of training, such as scenario-based training. There is little research about scenario-based training which can be substituted for qualification-based training. Without supporting information, firearms trainers, certifying agencies, and police agency heads will have difficulties convincing police policymakers to restructure their policies to mandate more effective types of training such as scenario-based training.

A passing score, as determined by individual agencies, in a police firearms test implies an officer's competence to deploy their firearms (Morrison & Vila, 1998), but this has not been tested for scenario-based training. Scenario-based training would create better decision-making skills among officers as it involves cognitive thinking and better overall decision-making, particularly when under stress, than marksmanship training alone (Andersen et al., 2016). In the region of this study, scenario-based training varies from agency to agency. For new officers, scenario-based training is part of basic certification or basic patrol training. Scenarios vary but are designed to test trainees' decision-making abilities. Training is somewhat subjective based on the instructor grading scenarios, but there are some criteria, from being able to take a subject into custody, or successfully locating someone hiding in a structure, which trainees must pass. These criteria are not standardized and vary from agency to agency. These scenarios are not always based on firearms particular training or designed to improve firearms-based skills, but involve incorporating firearms during building searches, traffic stops, and use of force scenarios.

Once officers are out of the training phase, scenario-based training is sporadic and done in inconsistent intervals when time permits. For in-service training, there are no set mandates for officers to continue being considered deployable. Scenarios are often made up based on training location. There are no lesson plans or set factors in terms of scenarios, and no matter how poor the decision-making displayed by the officer is, they are not required to retake this test and then move on to other training.

Scenario-based training outside of the police academy setting is treated as an extracurricular activity and an annoyance due to the manpower and time it takes to train officers. Current police policies for police agencies in the region of this study mandate marksmanship-based qualification of some kind but are not required to show good decision-making skills in scenarios to be considered qualified.

In the region of this study, the number of police shootings remains consistent every year. With more stringent police reform efforts in the state of Colorado in the previous years since HB-217 was enacted than previously scene, police agencies, as well as POST, the legislative entity that mandates certification and training of Colorado officers, a shift in legislative policies for police reform and agency training has already begun. Research involving policy changes to decrease police shootings at the state legislative level is lacking in terms of currently available research.

Numerous studies have been conducted involving weaknesses of traditional qualification-based firearms training, implementation of scenario-based training at the basic academy level, stress inoculation for pursuit driving, legislative-based reform, and psycho/physiological factors to find better ways to improve police officers' performance in high-stress situations such as shootings. There has been little research involving the experiences of officers who have been in shootings and how the training they received made them successful.

Due to a lack of knowledge by police trainers of the effective elements of scenario-based training, law enforcement policymakers and other community stakeholders require more research involving police reform to create more efficient

training policies which may decrease police shootings due to improved decision-making skills of officers.

Problem Statement

Research identified in the literature review on the field of police firearms tactics has focused on how individuals react to stress, which types of training are more effective, and legislative measures involving keeping officers from using their firearms incorrectly to decrease the number of officer-involved shootings each year. While scenario-based training is more effective at improving decision-making and preparing officers to perform under stress (Blumberg et al., 2019), there is a lack of information regarding perceptions of officers involved in shootings and what this training should include based on these perceptions.

A passing score on a police firearms qualification test is the nationwide standard determining an officer is competent to deploy their firearms, yet it is marksmanship based and does not improve decision-making under stress (Morrison & Vila, 1998). There is a lack of information on more cognitive-based training, such as scenario-based and its role in improving decision-making, particularly based on perceptions of officers involved in shootings.

What is lacking in the existing body of research is information involving types of training officers perceived to lead to improved performance during real-life shootings. Understanding perceptions of officers who have been in shootings and what training they found useful is needed for police agencies nationwide to create improved policies for

training and qualifications which meet the more stringent standards of performance based on legislative changes in the last few years.

Purpose of the Study

The purpose of this qualitative phenomenological study was to examine the experiences of police officers in an urban sheriff's office in the Rocky Mountain region who have been involved in deadly force encounters to gain an understanding of past training methods which led to success or failures in real-life shootings. By understanding this, a better model for determining officers' abilities to make sound decisions involving firearms deployment in stressful environments can be developed and implemented into training policies.

There is a gap in research involving public policies concerning police firearms training and the need for police leaders and trainers to develop more realistic and comprehensive means to determine officers' readiness to deploy their firearms. This study was designed to broaden the understanding of police leadership, police policymakers, and police trainers of what training policies officers found prepared them for shootings to identify effective forms of firearms training, which could be used for future policy development.

Research Question

The central research question for this study was: From the perspective of police officers involved in shootings, what forms of training influenced their decision-making in real-life deadly force encounters?

Theoretical Framework

Janis and Mann originally proposed the conflict model of decision-making where the decision-making process involves conflict and stress. Janis and Mann (1977) said excess or absence of stress was a determinant of one's ability to succeed or fail in terms of making decisions. When an officer is faced with a deadly force encounter, stress is typically less or more severe based on their experience and level of training. The conflict model of decision-making suggests stressors create declines in decision-making, with the degree of decline further influenced by the type of stress, potential risks, and anticipated action (Janis & Mann, 1977). Applying this model to the deployment of police firearms, identification of what stressors create declines in performance can be useful in terms of future police firearms training. Understanding what officers perceived during their training, how this manifested during real use of force encounters, and decision-making processes during stressful periods can help address what is needed during training to prepare officers prior to such encounters and related training policies. A better-prepared officer will experience less stress or the effects of stress and be able to make better decisions during deadly force encounters.

This study involved using the experiences of officers involved in deadly force encounters to identify how previous training can better prepare them to cope with stress and make better decisions to identify more specific areas of improvement for future training policies. I also identified areas of training that hindered good decision-making. Janis and Mann's conflict model of decision-making was used to identify particular

stressors based on the answers of participants and how these stressors affected decision-making.

Nature of the Study

This study involved gaining an understanding of training involving decision-making in real-life shootings. Research is lacking in terms of the application of police decision-making during shootings. I used a qualitative design to understand the phenomenon of decision-making under stress in police shootings.

A phenomenological design was used to allow officers to voice their experiences involving decision-making under stress in terms of how training policies led to their success or failures during shootings, and whether it resulted in them deciding to discharge their weapons or not. A phenomenological design was most suited to understand and gather information from smaller groups of participants and identify common themes, phrases, declarations, and common ideas concerning the phenomenon based on the experiences of individuals. Participants were located via email invitations sent to police agencies in the region of study public email addresses on their public websites. Data were collected using researcher-developed questions in virtual or face-to-face settings. Participants were 16 officers who had been involved in real-life shootings in the region of this study. This number of participants was based on the need for saturation. Atlas. ti version 9 software was used to help identify themes and organize data. A researcher-developed questionnaire was used with questions that were derived from the literature review for triangulation.

Definitions

Critical Incident Feedback Loop: A task analysis method where, through personal narratives involving an incident, ineffective and effective performance is identified and corrective actions are made and applied back in order for improved performance of the task (Police Executive Research Forum [PERF], 2018).

Deadly Force: Use of force where the intended, natural, and probable consequence is death (Colorado Revised Statues [CRS], 2020).

Firearms Training: Training provided for police which involves using firearms in live fire settings with real ammunition (Stringer, 2010).

Force-on-Force Training: Scenario training where participants take part in dynamic and simulated recreations of potential real police/citizen encounters (Stringer, 2010).

Qualification Based Firearms Training: Training that involves officers passing a marksmanship qualification as a means of determining readiness to be deployed for duty (Stringer, 2010).

Scenario-Based Training: Interactive training where officers work their way through a storyline, usually based around a complex problem that they are required to solve (Stringer, 2010).

Assumptions

An assumption of this study was that participants followed their agencies' current policies and were cleared both in the court system and within their agencies. I also assumed that interview questions were answered honestly by participants and they

provided an accurate and factual account of their experiences. I assumed that participants were familiar with their agencies' policies involving firearms training and use of force, as well as legal applications, at least at a basic police academy level. I also assumed participants had insights regarding their decision-making practices and accurately remembered deadly force encounters.

<center>**Scope and Delimitations**</center>

Delimitations refer to factors dictating the scope and confines of research subjects. This study involved expanding the existing body of research by identifying elements of firearms training that helped officers in shootings. In the existing body of research, there was a lack of information pertaining to police firearms training. While there was a great deal of research on firearms training, this information came from military and police manuals, agency policies, and other non-scholarly sources making it difficult to vet in the same manner as peer-reviewed material.

The delimitations of this study include officers involved in adjudicated shootings, on-duty in the last 10 years, from a state or local law enforcement agency in the region of the study, who have been through the mandated firearms training in their agency. This study was also delimited to agencies in a specific county in the Rocky Mountain Region of the United States with a small sample size being utilized. This study is transferable because of the ability to apply the data collected to varying agencies including but not limited to firearm training, police reform, scenario-based training, and police policies.

Delimitations for participants included (a) officers who are members of a state or local law enforcement agency in the region of this study who were involved in a police

shooting that has been cleared through the agency's internal affairs section and has already been through the court system,(b) participants who have been through the form of firearms training is mandated by their agency but may have had other experience with firearms training as it is still an element which affects their decision-making, (c) the participant's shooting was an on-duty shoot.

All participants were at least 21 years of age, the minimum age to be an officer in the region of study. Experiences levels of the participant's time working in law enforcement ranged from 3 to 30 years. Ranks of officers included officers, deputies, upper middle management such as sergeants, upper management including commanders, and lieutenants at these ranks at the time of their shootings.

For this study, the qualitative methodology with a phenomenological approach was used to provide research involving policy making and directions for administrators to guide them during the creation of policies dealing with police reform.

Limitations

This study had certain limitations due to the method of inquiry. This small sample size could limit the generalizability of findings, and applications to other policing agencies throughout the United States. Researcher bias was considered a possible limitation due to my extensive experience with law enforcement in the area of study, including my knowledge of firearms training methods, and experience in officer-involved shootings.

Overall, I relied on the ideas and beliefs of participants, using Janis and Mann's conflict model of decision-making. Experiences of officers reflecting on their shootings

and training policies were used to support the focus of this study and understanding of decision-making during shootings. Results of the study may be used to further efforts for improved firearms training policies for police agencies.

Significance of the Study

Police shootings create an emotional toll on involved officers as well as communities, particularly in terms of their trust in police agencies (Andonova, 2016). This study is significant in that it contributes to the body of research involving police training policies and provides further insights regarding decision-making processes officers go through when deciding to use their firearms. Police encounters with citizens happen quickly and can be unpredictable. A simple call for service can lead to deadly force encounters in a manner that gives officers little time to process what is happening and even less time to react. Better insights regarding these decision-making processes can lead to the development of more efficient training regimens and more effective policies for policing agencies. Scenario-based training is typically considered a supplementary element of training, and there are typically no consequences for failing this type of training and no retraining based on failure.

This study provides a resource for police policymakers in the region of study and nationwide to create training programs and policies which may improve officers' decision-making abilities when deploying their firearms. Information in this study will provide police policymakers and trainers leverage to request more time and funds for cognitive-based training as it is more time-consuming and costly to implement, but also

more effective than commonly used marksmanship-based training. Better decision-making by officers can lead to reduced chances of deploying duty weapons incorrectly.

Summary

Police reform continues with new reform bills being presented to police agencies in the Rocky Mountain region, yet police shootings continue and public outcry due to these shootings follows. There are always instances where an officer will have no other option but to use their firearm based on the actions of the subject. It is instances where an officer may fire their weapon, but a different force option would be more optimal that I address.

Chapter 1 included the theoretical foundation of the study. While there is research on the subject of police use of force and police firearms training, much of this information is older. Numerous studies have been conducted to determine police use of force issues, in many cases leading to legislation to decrease the number of incidents.

Police policies, legislation, agency protocols, and training involving the use of deadly force in the United States are controversial topics for citizens and agencies throughout the nation. Police officers face constantly changing and dynamic situations and are expected to work within the confines of rapidly changing laws and policies while ignoring their fear, decision-making under stress, and their human survival instinct. While the use of deadly force by police has existed for centuries, there is more public outcry, activist groups, and pressure from the media for policymakers to hold officers more accountable and create laws and policies to decrease the number of police shootings.

Police are accused of racism, a general desire to do wrong, or ignoring human factors. Chapter 2 includes a review of existing literature pertaining to the legal aspects of police use of deadly force, legislative efforts to decrease police shootings, police firearms training methods, and adult learning related to stress in order to understand this phenomenon and identify future police training policies. Chapter 3 includes a review of the methodology used for this study, data collection methods, and data analysis methods. Chapter 4 includes data collection and analysis processes. Chapter 5 includes the results of data collection, recommendations, and conclusions of the study.

Chapter 2: Literature Review

Introduction

Public policy implementation is a crucial part of police reform in order to legislate away undesirable performance by law enforcement (Simmons, 2011). Incidents such as Ferguson involving the shooting of an unarmed African American Michael Brown by a White police officer, and George Floyd, an African American killed by a White officer, as well as numerous other incidents have created numerous issues for law enforcement administrators and policymakers. While numerous reform efforts have been made on the national and local levels, police shootings have not declined significantly (FBI, 2020). Politicians, researchers, law enforcement officials, community groups, and the general public all have varying opinions on what should be done and how police reforms should be implemented. Several high-profile shootings and the resulting civil unrest in American cities have created an atmosphere of distrust between police and communities, leading to a mass exodus of police and a continuing increase in violent crime.

Law enforcement as a whole has seen many major advances in technology in the last 20 years. Policing is a constantly evolving field. Advances have not only been in terms of equipment and capability but also cultural as well. Police are called to deal with issues that would at one time have been handled by parents, mental health professionals, religious organizations, school administrations, or neighbors (Schwartz, 2016). Overall expectations of what a law enforcement officer is expected to do by society have evolved faster than law enforcement.

For law enforcement entities, police shootings cause scrutiny and public outcry. Due to modern expectations for police reform, even justified shootings cause distrust between communities, hurting relationships between citizens and the police. Even with more police reform efforts put in place nationwide, there have been few measurable changes as yearly police shooting numbers stay consistent (Chapman, 2019; Haskins, 2019).

Therefore, the focus of this study was to identify what elements of qualification and scenario-based training led to improved performance and decision-making during real-life shooting encounters. The purpose of this study was to examine the experiences of police officers who have been involved in deadly force encounters in order to identify where their past training led to success or failure in real-life situations, with the ultimate goal of creating better policies for firearms training which will lead to better decision-making for officers.

Chapter 2 includes the theoretical foundation of this study based on Janis and Mann's conflict model of decision-making. The chapter also includes existing research involving legislative and legal efforts to decrease police shootings, the manner in which adults learn, and the application of current training policies to understand what drives officer decision-making during deadly force encounters. These key areas influence police reform and firearms training policies.

Literature Review Strategy

A systematic review of existing research was conducted. Initially, I searched for sources that were published between 2015 and 2021; this was expanded to include

seminal sources that were published earlier. Numerous databases were used, including

EBSCOHost, Walden University Library, Emerald Insight, ProQuest Central, SAGE

Journals, SAGE Journals Premier, Google Scholar, Academic Search Complete, Political

Science Complete, SAGE Knowledge, and SAGE Research Methods. Search terms used

to locate pertinent data were: *police firearms training*, *police use of force*, *police firearms*

policies, *police shootings*, *police training*, *qualification-based training*, *scenario training*,

adult learning for skills, *police qualification standards*, *standards testing*, *firearms*

training for police and military, *decision-making*, *stress based decision-making*, *decision-*

making for police, *legal aspects of police shootings*, *excessive force*, *police use of force*

case law, and *legislative actions for police reform*.

Theoretical Foundation

The selected model for this study was Janis and Mann's conflict model of

decision-making. The need to make a decision involves a conflict that involves a certain

degree of stress, and too much or too little stress can determine failure to make a good

decision (Janis & Mann, 1977).

Janis and Mann's conflict model of decision-making has been applied to police

shootings in a very limited capacity. Researchers have applied the conflict model of

decision-making to many fields such as nursing and politics. Existing research involving

the conflict model of decision-making as it applies to police use of force was scant;

therefore, this project may help identify training policies involving police firearms

training.

Stress as applied to decision-making involves worrying about subjective losses from choices, and losses that are attributed to self-esteem, meaning one stresses over making a bad choice and looking bad toothier peers because of it (Alzate, 1998). With this model of decision-making, three antecedent conditions contribute to decisional conflict patterns, which are awareness of risk (one is aware there is a risk), finding a better alternative (making a choice they are more comfortable with), and time to assess the situation (deliberation over choices) (Alzate, 1998). The response of the decision-maker can be traced to five paths, un-conflicted adherence, un-conflicted change, defensive avoidance, hypervigilance, and vigilance. The Flinders Decision-making Questionnaire (DMQ), by using a series of multiple-choice questions, was used to identify how an individual makes a decision based on three approaches to decision-making. The first approach is vigilance, a careful, unbiased, and thorough evaluation of alternatives and rational decision-making. The second approach is a hurried anxious approach. Third is decision avoidance, escaping decisions through procrastination or avoiding responsibility.

The Flinders DMQ was used to examine the decision-making abilities of expert and novice officers to identify what kind of approaches they use to make decisions and how experience impacted the quality of decision-making. Due to only identifying the type of decision maker one is, the Flinders DMQ is limited and can be used to identify differences between expert and novice decision-making by identifying types of decision makers, but does not involve identifying experiences or training needed to make these distinctions. The Flinders DMQ is used to determine decision-making coping patterns

which are representative of a type of decision maker rather than identifying exact elements of decision-making behavior (Burnett et al., 2007).

For the purpose of this study, the Flinders DMQ would allow for an understanding of the type of decision maker an officer may be, but would not be able to provide an understanding of the experience of officer's decision-making under stress and how their training affected their decision-making. Burnett et al. (2007) said there were modest correlations found in samples of students who were in a university compared to those using the DMQ a year before entry into a university. There was evidence of some validity of the DMQ results, with it more suited to stressful decision-making where there is time to analyze the decision prior to the decision being made.

When a police officer makes the decision to shoot, it is a split-second decision without the benefit of thorough analysis, making it difficult to use the DMQ with the accuracy of specific elements needed for this study without excessive adaptation. In deadly force encounters, officers are typically forced into a vigilance or hyper-vigilance mode of decision-making (Junger, 2018). Police training begins in the academy to help bring a recruit into the desired vigilance state of decision-making and before being put into service, an officer will know there is a risk and has been trained to deal with alternatives for various situations. With this in mind the use of the Flinders or Melbourne DMQ may be better suited for an agency to use prior to hiring a person to determine their fitness for the job, but not as useful to determine why someone who is already in the vigilance state of decision-making will apply their training to make a decision during a deadly force encounter.

The area of focus for applying Janis and Mann's conflict model of decision-making for this study will be the Vigilance State where decision-making is made based on more precise cognitive conditioning, or effective training (Janis & Mann, 1977). This is the area where the best decision-making occurs due to realistic confidence in one's abilities based on experience either gained through time or instilled through training and the state an officer is expected to be in to make legally justified decisions.

Janis and Mann's model has been applied to a study by Janis and Mann (1977) in reference to emergency decision-making in relation to disaster response. In this study the conflict model of decision-making was applied to response by decision makers for emergency management through the analysis of tabletop exercises and the results illustrated a correlation between the level of stress and poor decision-making (Janis & Mann, 1977). Elements of the study alluded to factors of better decision-making when the subject had more confidence in their abilities, negating some of the stress in the process. White et al. (1994) said those who answered with the stressful factors, such as being overdue for Pap tests, showed more conflict or avoidance in their decision-making, the decision avoidance zone, while those who were familiar with the process and were up to date on checkups made more confident decisions exemplifying the vigilance zone of decision-making. This exemplifies the use of the DMQ for determining the type of decision maker but was limited to only that use for the study.

Studies on the decision-making process of coaches with experience compared to new coaches using the Melbourne Decision-making Questionnaire, a modified version of the DMQ illustrated a difference in experience level and decision-making. The basis of

the coach's decisions having an impact on the outcome of the game and the stress factors involved were related to Janis and Mann's decision-making theories (Awashti & Prabhakar, 2019). The study examined the decisional failures involved in catching decisions and compared the outcomes of real sporting events with experienced coaches and inexperienced coaches and determined that those with more experience made better decisions under the stress of a live game leading to a more desired outcome. Less experienced coaches avoided making decisions and the decisions that were made were done so out of hyper-vigilance and did not consider alternatives while making decisions. This same kind of experience level discrepancy is common for police deadly force encounters as the officer-involved may be of varied experience levels when they need to make a decision in the vigilance state to use deadly force.

Sawatsky (2019) applied Janis and Mann's conflict model of decision-making to policymakers during crisis. Sawatsky proposed that the common application of Janis and Mann's model was circular, meaning the stress can be caused by the demand for decision-making in the first place and that dysfunctional decision-making is a result of this stress. Sawatsky used case study analysis to identify key terms derived from policymaker statements to identify independent measures of stress created by conflicted decisions. For the application to this study, the conflicted decision can be attributed to the taking of another human's life adding an additional component of stress even when the other factors of an officer using deadly force may be more easily made portion of the decision.

Studies on the hyper-vigilance zone were conducted by Kappeler (2018) where through a case study analysis of terms and phrases taken from interviews, it was determined that many high-profile shootings and use of force incidents were made by officers who were in the hyper-vigilance zone, basically, in a state of panic. The study also examined the effect of hypervigilance on police training and its negative effects on police encounters. Junger determined that hyper-vigilance was partially caused by how repetitive training creates a pattern in officers to operate at a higher awareness level at all times. Junger applied Janis and Mann's decision-making theories suggesting that this hypervigilance was more similar to panic and deteriorated an officer's ability to make good decisions. The focus of the study was on hyper-vigilance, noting the poor decision-making characteristics created by hyper-vigilance under stress, and was a direct application of elements of Janis and Mann's model to police use of force.

The conflict model of decision-making was chosen for this study as the theory can be applied to explain how stress impacts decision-making with a focus on understanding what training helped an officer make decisions in the vigilance state. The existing literature for Janis and Mann's conflict model of decision-making illustrated two key factors important to this study. The first was that stress impacts decision-making in various ways. The second is that proper inoculation against the negative impacts of stress can be achieved through proper experience and training to help decisions be made in the vigilance state. The importance of appropriate stress inoculation through experience or training for improved decision-making is important to the study of police training as

these policies and practices will have a great impact on how an officer will react under stress, particularly in the area of decision-making (Poos et al., 2017).

     For this study, there was a need to identify why officers make the decision they do in deadly force encounters in order to develop more efficient training policies which will have a greater impact on officers making good decisions in the vigilance state, decreasing the likelihood they will make a poor decision in a hyper-vigilance or avoidance state, and use their firearm when it is not the best course of action.

The decision-making factors in the conflict decision model align with the concern for police decision-making due to the focus on stress, better application of decision-making based on knowledge and skills, and the ability to apply the model to quick decisions. The application of Janis and Mann's model in this study will help align the other factors which influence an officer's decision to use their firearm based on the answers from participants and their training experience.

<p align="center">**Literature Review Related to Key Variables and Concepts**</p>

The phenomenon for this study was why police officers make the decisions they do in deadly force encounters. A police officer making a decision in a deadly force encounter is ultimately a human being who is making a decision based on psychological and physiological factors. The following section of this literature review will examine the existing research on areas that affect the decision-making process, the efforts which have been made to guide officers' actions through legislation and policy, the manner in which stress affects a human being, and the manner in which police train to deploy their firearms.

Existing research in the area of adult learning theories explain how one learns a task and learns to apply the knowledge to a task (Merriam & Bierema, 2007). For police officers, this learning begins in the academy and is further developed through agency training and experience through on-the-job experiences. Another theme from the literature review of decision-making for police shootings illustrated the decisions an officer makes in deadly force encounters are guided by rules and regulations taught to officers which further guides an officer's decision-making process. The literature review also identified these are guided by law and policy, and legislative-based ideals are both designed to guide an officer as well as inhibit an officer from taking certain actions.

The literature review identified stress and decision-making as a key area impacting police shootings. The factors of stress, particularly stress in combat, the physical and psychological effects on the body, and the application to decision-making and performance under stress provide a better understanding of elements that training must consider to be grounded in the real world. Ultimately, police training is not new and training to more efficiently use a firearm is a major factor in police training. Further understanding of how police train, particularly in the area of firearms deployment is needed to further improve training policies for police firearms use.

Adult Learning

While decision-making is a factor in police shootings, how the officer has learned how to deploy their firearm is a critical aspect of their decision-making for police shootings. Research indicates that adult learning is complex, but all theories can be broken down into the aspects of knowledge, skills, and attitudes (Merriam & Bierema,

2007). Studies on behavioral theory for adult learning have proved to be most useful for competency-based learning where a stimulus leads to a change in behavior (Skinner, 1954). The theory states that inherited or innate factors have little influence on behavior and that the environment shapes the learner. The research into cognitive learning theory examined learning from the aspect of being a psychological process where the mind where the focus is on processing information (Bruner et al., 1966).

Research examining Humanistic Learning Theories furthers the idea that learning is more unique to the individual. The learner must take an individual approach to develop themselves and become self-directed and motivated to learn. In contrast, research focusing on social learning theories focuses on learning as a social activity stating the learner will be shaped by the context of their relationship to the community they are part of. The learner is influenced by the setting in which the learning activities take place (Wilson, 1993). Motivational learning theory relies on the expectation of a learner to achieve success. If the learner does not expect to be successful, they will have little motivation to learn (Ryan & Deci, 2000). Lastly, reflective theory states that reflection leads to action and then change. This is particularly useful for developing autonomous learning in students as reflective leads to the development of knowledge and tools to drive learning (Archer, 2012).

A police officer's decision to fire their duty weapon comes from some kind of learned behavior. Each theory has strengths and weaknesses and elements which are useful for learning combat. Adult learning when applied to dealing with police deadly force encounters focuses on engraining more cognitive and emotional processes and not

just the skill-building elements (Blumberg et al., 2019). While a police officer must learn to deal with stress in order to succeed in a deadly force encounter, elements of all learning theories apply to some aspect of the totality of the processes of skills and knowledge needed to make good decisions in a gunfight.

From a social learning aspect, throughout a police officer's career they will be part of various social groups, from recruit to a seasoned officer, with numerous subcultures attached to various assignments they have throughout their career. The social learning variables will be dependent on where an officer is in their career and where it falls into the social group they are in at the time. A cadet in the academy will need to have the reward aspects of behavioral theory, which can be as simple as the reward of shooting well enough to pass the academy. A more seasoned officer may need something more motivational to drive their learning well beyond the needs of an academy recruit. A more experienced and skilled officer, such as Special Weapons and Tactics (SWAT) officers are a unique subculture within an agency. The social context for these officers is focused on tactics, shooting, and fitness and they will not learn or be motivated in the same way as a recruit or even a more seasoned officer.

These elements must be considered when determining what an agency's policy should be in the context of firearms training. While all learning theories have an application, a consistent element for adult learners is the need to be challenged (Kusurkar et al., 2013). With most agency firearms training policies mandating the equivalent of basic academy training throughout the varying experience levels in an agency, officers are not learning fast enough to adapt to the changing laws, changing legislation, and

changing citizen expectations. They are also not being forced to learn to deal with one of the most important aspects of a deadly force encounter, stress.

Meichenbaum's Stress Inoculation Training (SIT) was created from research indicating that exposure to stress and focusing on cognitive-emotional training instills a reaction into an individual which can create an automatic fallback response during a stressful situation. These processes create situations where a learner can be exposed to more stress to inoculate them from the effects.

Research during WWII for the application of STI to real use in combat was made by switching from bulls-eye type targets to human-shaped silhouettes which fell when shot (Thomasson, 2013). The focus of this experiment was to see if it would encourage shooters to increase their firing rate during practice by adding some kind of stimulus. The stimulus training translated into a real word reaction in actual combat creating a reaction in the soldier to automatically bring up their weapon and fire at human targets coming into their field of view as they had done in training (Thomasson, 2013). This use of silhouette-style targets is still commonly used for police firearms training and qualification. Also focusing on the effort to further break down the cognitive aspect of this reaction to act a particular way when presented with a stimulus was furthered by research by Air Force Colonel John Boyd in his development of the OODA loop. The research, initially applied to air combat, created an explanation for the process of decision-making from start to finish. OODA refers to observe, orient, decide, and act, the process one must go through in combat to deal with an imminent threat (Rule, 2013).

When faced with an adversary, the first step of "Observe" relates to one's ability to observe the raw information of the threat, or to see the danger (Rule, 2013). The orientation step involves the ability to filter information through personal experiences, culture, and previous experiences. A decision is accomplished through the process of the brain determining, based on the orientation step, what the best course of action is. The relation of the OODA loop to adult learning for combat is the speed and accuracy in which the process from start to finish occurs. Although it sounds lengthy, the process takes place in a matter of seconds. Driskell et al. (2006) furthered this research identifying the ability to make an accurate timely decision under stress, relies on the ability of someone to pull from prior knowledge to make a decision rather than developing a new action plan based on limited information.

From a police shooting perspective, the decision to shoot or not would be an example of the decision stage with the previous steps being heavily influenced by an officer's experience. The action stage is the final stage where, based on all previous stages, the final action for dealing with a threat is put into place, for a deadly force encounter, pulling the trigger and firing the round.

With the average police academy for police agencies in the region of study lasting 22 weeks, the majority of firearms training focuses on passing the qualification, there is little in basic training preparing a recruit for the stressful decision-making they will endure during real-life situations. A way to overcome training limitations for police or many fields is scenario-based learning. Also referred to as experimental learning or problem-based learning, the basis lies in the principles of situated learning theory (Lave

& Wagner, 1991), and the theory of situated cognition (O'Connor & Glenberg, 2006).

The existing research in these areas states the best learning comes from the situation

being based in real context to how it will be used and situated cognition being the idea

knowledge is best acquired and more fully understood when situated within its context.

Legal Aspects

While media outlets make police shootings out to be a constant event, with the

hundreds of thousands of contacts police make with citizens each year, shootings are

statistically rare. On average for the last decade, there are around 1,000 police shootings

per year with 350 of those incidents resulting in death in 2019 (FBI, 2020). While the

exact numbers fluctuate up or down each year, there have been no drastic decreases even

as more and more calls for police reform had been made by the public. Much of this can

be attributed to the fact that police use of force, especially deadly force, is already a

strictly mandated area with legal and inter-agency policies dictating what an officer is

allowed to do based on the actions of the subject they are contacting. These legal aspects

must be considered when understanding an officer's use of force and why agencies have

certain policies in place. These legal aspects are part of the learning process officers must

consider when making their decisions.

Peters and Brave (2007) identified key areas in federal laws concerning police use

of deadly force, the Federal Civil Rights act of 1964 defined what constitutional

violations were concerning police actions. In response, police agencies began better

defining the use of force in their agencies (Peters & Brave, 2007). While an individual

agency was allowed to define its concept of use of force, the definitions were subjective

and unique to each agency with no universal definition for use of force or deadly force (National Institute of Justice [NIJ], 2020). A general definition accepted by the Association of Chiefs of Police is use of force is, "The amount of force required by police to compel compliance by an unwilling subject." (NIJ, 2020, para. 1). Upon researching the State of Colorado equivalent definitions under the Colorado Revised Statutes (CRS) use of force for citizens under 18-1-704 was defined as:

A person is justified in using physical force upon another person in order to defend himself or a third person from what he reasonably believes to be the use or imminent use of unlawful physical force by that other person, and he may use a degree which he reasonably believes to be necessary for that purpose. (CRS, 2020, Title 18, 18-1-704, Subsection 1)

A further definition for citizens for use of deadly force under this section states, "Deadly physical force may be used only if a person reasonably believes a lesser degree of force is inadequate" (CRS, 2020, Title 18, 18-1-704, Subsection 2).

For police officers in the regions of the study, there is no unique set of laws which govern their use of force as they are subject to the same legal guidelines as any citizen. What dose exists are separate defenses attributed to police officers for using force with elements needed to be proven by a court of law in the determination of an officer's righteousness in using force. In Colorado justification for use of force is determined under the following conditions:

Police officers are allowed to use physical force when making an arrest or in preventing an escape. The amount of force allowed depends on the type of force

used and the threat to the police officer or a third person. A peace officer is justified in using reasonable and appropriate physical force upon another person when he or she reasonably believes it is necessary to make an arrest, prevent an arrested person from making an escape, or to defend the officer or another from what he or she believes to be the use of imminent physical force. A peace officer is justified in using deadly physical force only when the officer believes it is reasonably necessary to defend the officer or another from the use of imminent deadly physical force, or to make an arrest or prevent an escape from someone who has committed a felony involving the use of a deadly weapon, or indicates a likelihood to inflict serious bodily injury or endanger to human life. An officer is justified in using a chokehold on another person only when he or she reasonably believes it is necessary to effect an arrest or prevent an escape of someone who has committed a felony involving use of a deadly weapon, attempting escape by use of physical force, or indicates a likelihood to inflict serious bodily injury or endanger to human life. (CRS, 2020, Title 18)

It is an agency's internal policy on use of force that provides a more complete guide for how an officer is expected to use force while on duty. Unique to each agency, force policy typically follows a Force Continuum Model (FCM) to help the officer choose the correct type of force based on the situation. The FCM is designed to guide an officer to use the lowest amount of force possible with the ability to escalate or de-escalate throughout the model as the situation changes (Peters & Brave, 2007).

The FCM guides officers to what is accepted as appropriate use of force with an agency's policy matching this model and provides a model for determining if an officer was in compliance with the force they used. The FCM is only a guide and it takes many other training elements to prepare an officer to apply the FCM to real situations under stress.

With the focus of this study being on officers in a particular Rocky Mountain region, the research identified particular major cases in a major metropolitan area of the region in Colorado, which has influenced case law and policy. Stringer's examination of failures in police shootings identified several cases in the Denver Metro area in which legal ramifications and police policy collided to make it difficult for accountability for what was as perceived "bad shoots" by police. In a case held in the 10th Circuit in Denver, Colorado, the case of Zuchel v. Denver illustrated this issue. During this incident, officers responded to a disturbance where the officers approached a group with their backs turned to the officers. At one point one of the males, Zuchel, was arguing with the other parties and someone yelled that he had a knife. Zuchel turned to the officers and was shot and killed. No knife was located, only a set of nail clippers near his body (Stringer, 2010).

The officer in question was not found guilty of any criminal charges or internal policy violations. From the aspect of CRS, the officer believed they were preventing another from impending bodily injury, as it meets the objective reasonableness test. Objective reasonableness must view the facts an officer was faced with at the time a decision was made (Kappeler, 2006). While this application can be extremely

generalized, the research identified two major Supreme Court cases which set the

standard for what is reasonable for an officer and the limitations of an officer's ability to

use force as well as a third case which found further flaws in the application of the other

two. The first, Tennessee v. Garner 471 U.S. 1 (1985) involved the shooting death of an

unarmed 15-year-old who fled a burglary with only a piece of jewelry worth ten dollars.

It was determined that Garner's death was a violation of the 4th amendment and that the

shooting, in this case, a fleeing felon, has to be weighed against the chances of further

harm to the public if the subject was allowed to escape (Kappeler, 2006). This case set a

standard that was difficult to apply as there was no standard to what defined an officer

being considered reasonable.

The second Supreme Court case of Graham v. Conner 490 U.S. 386 (1989)

determined that while "reasonableness . . . is not capable of precise definition or

mechanical application" (Graham v. Conner 490 U.S. 386, 1989), there were several

areas an officer must consider when deciding to use force. These included whether the

suspect poses an immediate threat to the officer or others, the severity of the crime, if the

suspect is actively resisting, and whether the subject is a flight risk or attempting to

escape custody.

While these Supreme Court cases are the main base for use of force

reasonableness standards consideration in the courts, there have been several decades of

application of these fundamental cases to police use of force in the court system. The

third case of Scott v. Harris 550 U.S. 372 (2007) where the suspect, Harris, was seriously

injured while fleeing from the police, Scott, due to an improperly applied technique to

cause the vehicle to spin to a stop exemplified further application of Graham and Garner

decisions (Hamilton, 2017). The issue of Harris's actions causing a need for officers to

use force was questioned, ultimately supporting the reasonableness of Scott's actions, but

created a great deal of criticism for using reasonableness in an ad hoc fashion in officer

use of force cases and demanding more articulation of reasons for using force in a given

situation (Hamilton, 2017).

With so many variances the correct decision in a given scenario can vary greatly

with case laws having a large impact on the determination of reasonableness of an

officer. In the case of Plakas v. Drinski19 F.3d 1143 (7th Cir. 1994), a US Appeals Court

case out of Indiana, stemmed from the fatal shooting of the suspect, Plakas, by an Indiana

Deputy Sheriff Drinski threatening to kill officers with a fireplace poker. It was argued

that the shooting of Plakas violated his fourth amendment rights as no less lethal force

options were used. The findings determined that the actions of law enforcement were

reasonable and that there was no expectation to meet a potential deadly force encounter

with less lethal force (Plakas v. Drinski19 F.3d 1143 7th Cir. 1994).

In the case of Canton, Ohio v. Harris 489 U.S. 378 (1989), Harris sued the City of

Canton for failing to provide her medical attention, a violation of her 14th Amendment

rights. The determination was the city of Canton was liable for failing to properly train

officers and local government entities can be held liable when there is deliberate

indifference to the need for training (Canton, Ohio v. Harris 489 U.S. 378, 1989).

The Case of Thompson v. Hubbard 257 F.3d 896, 899 (8th Cir.,2007) examined

the reasonableness of Office Hubbard's shooting of the suspect, Thompson, who ran from

an armed robbery and shots fired call. Hubbard responded to a shots fired call and ran

into an alley near the building following Thompson who matched the description of one

of the suspects. There was ultimately a foot chase and at one-point Thompson reached

into his jacket as if reaching for a weapon and ignored Officer Hubbard's commands to

stop. Hubbard shot Thompson and it was determined Hubbard did not have a gun.

Hubbard was found justified in his actions with the case determining that reasonableness

must be perceived from the eyes of the officer at the time and not on hindsight

(Thompson v. Hubbard 257 F.3d 896, 899 8th Cir., 2007).

Citizens are further protected from excessive use of force by police by the U.S.

Constitution. The Fourth Amendment, which covers the rights of people to be secure

against unreasonable search and seizure, and is the base constitutional right examined in

stops, surveillance, search warrants, arrests, and other issues of abuse of government

power. In this essence, it has been assumed that the Fourth Amendment also provides

guidance for police use of force, but an assessment of police policies by Obasogie and

Newman (2019) suggests otherwise. The assessment of police policies done through a

case study of use of force reporting showed that the Fourth Amendment was applied in a

manner to determine what was considered "reasonable", but had additional caveats built

in to reflect the interest of the law enforcement agencies (Obasogie & Newman, 2019).

With the examples illustrate major influencing and highly referenced cases, there

are hundreds of example case laws that can be applied to an officer using force. The legal

aspects of when and how an officer can use force are, if nothing else, confusing. From

case to case and application and development of new case law, officers are faced with an

ever-changing set of legal guidelines which they must apply under high stress when

making a decision to fire their weapon or not. Understanding the existing literature as it

relates to the legal aspects an officer must consider when using force, especially deadly

force is important when understanding the decision-making process an officer makes

under stress. The mentioned concepts are all taught to recruits as a basic part of the police

academy, but the nuances of navigating through the applications and definitions are

difficult even for the court system, more or less when an officer is processing this

information under stress and having to make a split-second decision.

Policy and Legislative Efforts

Massive pushes for legislative actions to improve police reform efforts have

created efforts to decrease police using what is deemed inappropriate force, hold police

and agencies responsible for infractions, and mandate more training in areas such as de-

escalation and the use of less lethal devices. Even with these measures, there have been

few measurable changes (FBI, 2020; NIJ, 2020). Several phenomena have been identified

as attributing to the lack of change, from inconsistencies in accountability from agency to

agency, institutional racism, and lack of funding for proper training (Chapman, 2019;

Haskins, 2019). Focusing on police shootings, the existing research examines many areas

in an effort to identify why shootings happen and steps to prevent them.

Racial bias is an area legislation has blamed for police shootings and has

attempted to correct through legislation and policy. A study by Worrall et al. (2018)

challenged the narrative of bias by examining the phenomenon of racial bias using a case

review of shoot and don't shoot scenarios from a large municipal police department. The

findings of the study suggested that not only were African Americans not disproportionately targeted by the police, but that only one-third of the police shootings were of African Americans. In a similar effort, another study attempted to determine the influence of racial bias on police shootings through the use of experiments, examination of videos, and role-play using real officers (Cox et al., 2014). Given various scenarios, officers were presented with white and black targets. This resulted in a mix of results with some bias being present in the examination of the videos, but none measurable in the role play scenarios (Cox et al., 2014).

The studies illustrate that controlling racial bias alone will not decrease shootings and policies and legislation must understand there are other factors and shootings do not happen in a vacuum. Brandl and Stroshine (2012) approached this effort from a statistical manner to determine what factors led to shootings from the aspect of the type of call, actions of the suspect, and even experience level of the officer. Also focusing on attributes of officers, Ridgeway (2015) attempted to analyze 291 police shootings in New York to identify the characteristics of officers who fired their weapons compared to officers who did not fire their weapon in similar situations.

Various studies on policy and its effects on police shootings have been conducted examining if changes in policies have had an effect on the number of police shootings. Jennings and Rubado (2017) examined purely administrative efforts for policies to determine if there was a decrease in the rate of officer-involved shooting deaths. In the case of this study looking at several areas throughout the country, it was determined there was little to no correlation to police shootings being decreased by any policy put in place.

Of a similar nature, Mays and Taggart's (2018) study of administrative policy actions in urban areas examined the feeling of officers and their perceptions of the policies their agencies used to combat police use of force. Again, policy in and of itself did not play any identified role in lowering the use of force by officers.

Shjarback, et al. (2021) examined the policy put in place by the Dallas police department concerning a policy which requires officers to document every time they pointed their duty weapon at someone. The data collected analyzed the number of shootings between 2003 and 2018 to determine if a decrease in shootings occurred after the policy was put in place. There appeared to be a decrease in what was considered "high discretion shootings", shootings where more decision-making was needed, over a gradual period. The reason for the decrease could not be pinpointed in the manner this study was conducted so the full conclusion was that this form of legislation may have potential, but more research would be needed.

The policies established by agencies can also have an impact on an officer's decision-making as explored by Murray and Haberfeld (2021). Their study examined the ways in which the rules of engagement set forth by police agencies may hinder an officer's decision-making by creating an instinct to react a certain way rather than to take in information specific to the event and apply a good decision. Murray and Haberfeld applied the term unconscious incompetency to the phenomenon of officers making decisions that they believe meet policy, but do not even realize they are making the incorrect decision (Murray & Haberfeld, 2021).

Police Firearms Training Policies

To understand the need for changes in how police deploy their firearms there needs to be an understanding of what policies and practices for firearms training are in place and how these principles were developed. With the advent of official American policing in the mid-nineteenth century, formal training and standards were not developed until the mid-1920s (Morrison & Vila, 1998). The standards were varied without basis in any scientific method and it was not until the 1960s that regimented standards and qualifications for police handgun deployment began being required in agencies throughout the country. A basic police qualification is a marksmanship-based course of fire where an officer will fire a pre-determined number of rounds from varying positions and distances. The targets used vary, but in order to pass a certain number of rounds fired must be in a passing score zone of the target. The exact number of rounds, passing score and other nuances of the course of fire are determined by a particular agency's policy.

From a state certification policy level, the governing agencies of the state set the policy for what a qualification will be for basic certification and in some cases, ongoing requirements for an officer. Researching the expectation for the focused area of this study, in the region of study in one particular state, Colorado, this standard is set by the Colorado Peace Officers Standards and Training (POST) run by the criminal justice section of the Colorado Attorney General's Office. The mission of POST is to establish and maintain the standards for police officer training and certification in the state (Colorado POST, 2021, Mission Statement). Each state throughout the nation has a similarly established governing entity managing law enforcement training standards. The

current certification at the time of this paper was a 25-round handgun qualification course on a B-27 or similar target(a silhouette of a person with a scored target in the center of it) or similar target. There are several stages ranging from distances of 3 to 25 yards with a certain number of rounds that must be fired at each stage.

This type of firearms training is the standard by which agencies determine officer readiness and there are decades of research dedicated to firearms training in this manner. Research by Morrison and Vila (1998) analyzed modern police firearms training tactics and determined that it was outdated from the aspect of being used as a realistic determination for readiness. Thomasson (2013) conducted a study examining firearms training performance supporting the idea that traditional firearm training is inadequate. Thomasson examined New York Police department shootings since the 1970s and it was determined there was only a 15 percent hit rate, with less than 45 percent at greater distances closer to 25 yards (Thomasson, 2013). Statistics such as these are not uncommon and have led police firearms trainers to look at other means of training to better prepare officers for deadly force encounters.

Research into the perspectives of officers pertaining to their firearms training was that it was lacking. Research conducted to understand officers' perceptions of their training determined that officers perceived their training as insufficient to prepare them for an actual confrontation (Beasely, 2020). As training has progressed for firearms training, police training policies have done little to address the need for change with the individual training programs being left to the discretion of the firearms trainers. For agencies in the region of study, firearms training is a quarterly event with two to four

hours dedicated to firearms training mandated by the individual agency and not the state.

Other research in the field of police firearms training addressed not only the accuracy of

an officer, but the ability of an officer to make a good decision during a high-stress

situation such as a deadly force encounter.

Stress Performance in Combat

Armed combat is a highly stressful event and there are several underlying

elements that affect the psychological ability to perform well under stress. The concept of

the Inverted U Theory developed from research by Yerkes and Dodson (1908) has been a

theory heavily applied to combat. This theory states that a person's performance under

stress will be negatively affected if their arousal is too low or too high. The optimal

performance level falls into a specific area at the height of the inverted U (see Figure 1).

Figure 1

Inverted U

The inverted U theory related to police firearms deployment is closely tied to the

Sympathetic Nervous System (SNS) and how it affects the body (Westman & Eden,

2007). Westman and Eden (2007) identified the SNS is comprised of two systems, the

autonomic and parasympathetic nervous systems these systems, among other functions,

maintain the human body's functions, priming the body for action in threatening situations. Westman and Eden drew heavily from Brodal's research of the central nervous system which, when applied to combat, the SNS is responsible for stimulating the body's fight or flight responses when faced with danger. The resulting activation of the SNS is responsible for the symptoms of stress including tunnel vision, shortness of breath, and loss of fine mot skills due to the vasoconstriction of the blood vessels (Brodal, 2004). While the activation of the SNS cannot be stopped, training can allow a person to adapt to these changes when faced with stress.

When applied to training for operation of a vehicle in combat, research showed a trained professional can react with a predetermined survival reaction while an untrained person will fall back to the physiological effects including freezing, fighting, or flight (Malhari et al., 2021). This training allows the person to fall into the preferred arc of the inverted U as a predetermined response much quicker and more easily maintained. Studies for the US Army for enhancing human performance indicated that a person's stress level will be higher if they believe that they are not prepared to accomplish a task they are faced with (Druckman & Swets, 1988). Applying this logic to a police shooting, the best way to prepare an officer for this deadly force encounter would be to have them do training that mimics the type of environment they will have to perform in during a real encounter. While this will not elevate the stress level to that it would be in a deadly force encounter, the research suggests it will improve their ability to respond to the threat.

When these theories are applied to marksmanship-based qualification training, it is lacking providing emphasis on performance under stress. When the element of stress is

not a factor in how preparedness is measured, then it stands to reason based on previous research that qualification-based training is only a test of marksmanship and not true preparedness for a deadly force encounter. Studies illustrated that preparation for a task is greatly helped by previous exposure to the task. Policing agency's policies, in order to be responsive to police reform efforts, must also adapt creating policies which test an officer's true ability to perform under stress in a manner that qualification-based firearms training cannot (Kelsey et al., 1999). In a similar manner, Hashemi et al. (2019) examined the aspects of stress in the decision-making of the actions of freezing or startle response when faced with a threat as part of the preparation for decision-making process. Through the use of two groups, Dutch civilian and Dutch police recruits, using a speed decisional shooting drill and monitoring physiological aspects such as heart rate and neural activity. The study resulted in the identification of an improved reaction from the startle response with those police recruits who had taken part in training showing a link between the quicker activation of the neural pathways to make a decision.

Studies examined the effects of stress on Belgian police and how it influenced their decision-making. The research, combining two studies, a quantitative study utilizing interviews of members of the Department of Waters and Forrest on the stress of use of force, and a qualitative study examining stress on shooting accuracy led to the main finding that officer's greatest cause of stress is the knowledge they will be held accountable for their actions (Verhage et al., 2018). A determination from this study was that officers needed greater tools to help them deal with day-to-day decision-making (Verhage et al., 2018). The study illustrates an aspect of decision-making where officer's

decisions are based on a fear of failure, which Janis and Mann determined was stress

attributed to the losses to self-esteem (Alzate, 1998), ultimately, officers do not want to

fail and want to do the right thing. Stress for an officer is both psychological and

physiological with research into both areas suggesting experience through time or

training is needed to better cope with these elements.

Scenario-Based Training

Research has repeatedly identified the benefits of simulation or scenario-based

training for various activities, from athletics to military training. For example, for

performance in sports, the introductions of noises to simulate a live crowd have been

introduced since this stimulus has been shown to influence real-life gameplay (Akbas et

al., 2019). Applying scenario-based training to police combat, Andersen, et al. (2016)

attempted to see if scenario-based training would stimulate a psycho-physiological

response when applied to SWAT teams. The study illustrated an improvement in dealing

with stress when training simulated the real environment SWAT teams work in based on

them already being acclimated to the environmental stressors.

Scenario-based training refers to training that supports learning through

interactive scenarios where the students work their way through a storyline based on a

real-world problem. Learning in this manner requires a student to apply their knowledge

base to a complex, often ill-structured problem in order to navigate the scenario (Clark &

Mayer, 2009). There are numerous benefits to scenario-based training, especially

pertaining to adult learners. Jenkins et al. (2021) s identified that adult learners are more

self-motivated and are more inclined to take an active part in their own learning

experience when they see immediate benefits using an event approach to learning. They are also more likely to use their own experiences as part of the learning experience and use their knowledge to solve problems. Scenario-based training caters to many of the aspects of adult learning by creating motivation through participation, problem-solving skills, and the ability to provide immediate feedback from a scenario (Clark & Mayer, 2009).

Scenario-based learning has been utilized in many fields from engineering to nursing as a means to better replicate the real-world environment and better prepare members of a particular discipline. Research by Cannon-Bowers (2008) applied scenario-based learning to the medical field focusing on the anesthesiology field. The study identified ways in which scenario-based training based on utilization from a military context could be applied to the medical field, and measured and organized to improve conceptual aspects of the medical field. The results identified that when applied correctly, scenario-based training did have a marked positive effect in performance and laid out a foundation for further improvement of scenario-based training for medical purposes.

Scenario-based training using virtual reality is often used for pilots in the form of flight simulators or driving simulators teach people to drive cars and it has been shown that this type of simulation creates a good base for application to the real event (Fisher et al., 2002). Blickensderfer et al. (2012) identified that the management of stress in an emergency situation, in this case flight, and could also be better served with scenario-based training. Studying the use of emergency whole-plane parachutes, students in scenario-based training were shown to perform better than those in the control group

which had a more lecture and computer-based training process. It was determined that those in the scenario-based training for this study made quicker and more accurate decisions when utilizing the emergency flight gear.

Scenario-based training when applied to most fields has been successful based on the consistent concepts Clark and Mayer (2009) identified areas used to determine if scenario-based training is appropriate including:

1. Are the outcomes based on skills development or problem-solving?

2. Is it difficult or unsafe to provide real-world experience of the skills?

3. Do the students already have some knowledge base to aid in decision-making?

4. Do you have time and resources to design, develop, and test scenario training?

5. Will the context and skills be relevant long enough o to justify the development?

Principles of scenario-based training have been applied to firearms, police, and military training with for many years with success.

Scenario-Based Training Firearms Policies

From the varied legal aspects noted, legislative demands, psycho-physiological factors, and research existing for scenario-based training, firearms training utilizing scenario-based aspects create the combination of stress inoculation and cognitive processes needed to learn better decision-making. Studies identified the US military spends 17 billion each year to train its soldiers for combat. Salas noted that with the cost of training so high, the military has traditionally focused on efforts that apply the best training methods to minimize costs to train soldiers for the high stress, cognitive,

behavioral, and attitude-based needs to be successful in combat (Salas et al., 2006).

While militaries throughout the world have used realistic training, from marches to war

games, to air combat simulation it is only more recently that the efforts to understand the

scientific aspect of scenario-based training have occurred.

Law enforcement has utilized scenario-based training in various ways throughout

the decades with a great emphasis on methods developed by the military. An aspect of

scenario-based training that deals with the psychological factors of killing another human

being and traces back to the earlier mentioned efforts to increase firing rate by using

human-shaped silhouette targets. Watson (1978) identified that prior to the use of

silhouettes, it was determined that only about 15 to 20 percent of soldiers in WWII were

firing their weapons. As the implementation of changes to silhouette-type targets took

effect Watson noticed there was an increased firing rate of 95 percent of soldiers that

could be seen going into the Vietnam War.

Aside from desensitizing law enforcement personnel from the psychological

issues of shooting at a person, the use of video games has been attributed to desensitizing

people from violence and has contributed some anecdotal evidence to support this.

Anderson, et al. (2010) conducted studies and determined there was a link between those

who played violent video games and increased aggression. According to Grossman and

Christensen (2008) the military began experimenting in the use of video games in the

simple form of modifying existing hunting games and altering them to shoot at people

with realistic training guns. These systems further developed into purpose-built simulator

devices known as Firearms Training System (FATS). FATS was developed by race car

driver Jody Scheckter for improving race car driving through simulation but further developed the company to provide interactive firearms training to the military and eventually the police (InVeras Training, 2021).

The US Postal Inspectors bought the first system for non-military use in 1985 and it was eventually adopted throughout the nation for police training. The system works by projecting a scenario similar to a movie onto a screen in a training area. The training participant can fire a gun using lasers to designate hits according to what is seen on the screen. As the system has developed over the last several decades the addition of branching options to support officers' choices have been included so officers can more accurately go through full calls in the form of video scenarios, including the use of verbal de-escalation to less lethal force options (InVeras Training, 2021).

Grossman and Christensen (2008) noted that the use of simulators create some of the key components of stress inoculation for police training as referenced earlier, such as sight and sound stimulus, SNS stimulation, and decision-making. Limitations of the system include the limited number of scenarios available, and a limited amount of realism for the use of surroundings as the system is cumbersome and typically set up in a designated office space. Similarly, Murray and Haberfeld (2021) studied the use of shoot house as a scenario-based option where participants can use real firearms and ammunition as part of their training. Also referred to as a "Kill House", training for urban combat environments can be accomplished through the use of bulletproof structures designed to replicate a residential or industrial structure. Through the use of shoot or don't shoot targets participants can learn to move through the structure, place accurate

hits on targets, and use cover and concealment as part of their firearms training. Murray and Haberfeld's research indicated that this training does have a weakness of causing bad habits if the scenarios are not set up and debriefed correctly. Building these structures can be costly, and there are limitations on what can be done due to basic range rules needing to be followed for safety purposes.

Thomasson's research into police firearms training identified the use of Simunition technology as a valuable tool for scenario-based training for police. Simulated combat is performed with the use of non-lethal paint marking rounds that can be fired out of firearms which match the feel and function of the real firearm, have felt recoil, a loud report, and can be manipulated and re-loaded just like a real weapon (Thomasson, 2013). Furthermore, shot placement can be accurately observed through the use of different color paints available for the rounds.

Thomason's research noted scenario training with the use of Simunition ammunition has become popular since there are no limitations to how the scenario can be designed, scenarios can replicate real-life incidents, the training can be done almost anywhere (while maintaining safety considerations), and the use of the Simunition guns is relatively safe. Officers are not limited to just what is on the screen in front of them but are able to use the environment around them as they would in real-life. Trainers may also shadow the trainee and move with them throughout the scenario to gain a better understanding of what the trainee is experiencing.

The ways to accomplish scenario-based training vary as much as the policies which dictate scenario-based training in agencies. In agencies in the region of the study,

scenario-based training is conducted in many ways, but there were no existing policies for the training to be part of a qualification or a measured exercise for ongoing, in-service training. While the training is mandated to be part of the basic certification academy by Colorado POST (2021) there are no requirements that the scenarios be passed in order to graduate from the academy and achieve certification.

Summary

There are many gaps in research pertaining to police firearms training policies, particularly the identification of measures and tests for scenario-based training. Existing research suggests that training for police officers to deploy their firearms is better accomplished by explaining stress inoculation, adult learning, and scenario-based training. The inclusion of these factors can lead to an increase in better decision-making for police officers. There are several gaps in research involving police policies that are currently in place for firearms training in terms of how they align with existing research.

The primary research gap I looked to address was identifying what officers perceived to lead to improved performance in real-life shootings based on their actual experiences and training policies they were subject to. The purpose was to gather data that can be used in the future by police policymakers to improve methods to determine whether officers are ready for duty. There was a lack of specific applications of learning methods or explanations of learning theories in the context of police shootings.

Several studies identified weaknesses of traditional firearms training and identified that scenario-based training is better for decision-making, especially during combat scenarios. Many studies examined how police policymakers have attempted to

use policies or legislative changes to decrease police shootings in the United States, as well as policies and laws which dictate how officers must apply use of force. There are several deficiencies which must be addressed for policymakers to address to create meaningful police reform and decrease police shootings. Chapter 3 includes the research method for this study, including the research design and methods used to gather data from participants.

Chapter 3: Research Method

Introduction

The purpose of this qualitative study was to examine the experiences of police officers who have been involved in deadly force encounters in order to identify where their past training methods led to successes or failures in real-life situations. By understanding this, a better model for determining officers' ability to make sound decisions involving firearms deployment in stressful environments can be developed and implemented with training in the county where this study was conducted. A better understanding of how training impacts decision-making can be applied to improve training policies in the region, as well as throughout the United States. A phenomenological design was used to understand the perceived experiences of participants. I obtained information regarding the identification of how firearms training has influenced decision-making and prepared officers to perform better during real-life encounters.

This study contributes to social change by addressing police policies concerning firearms training, allowing policymakers and administrators to develop more efficient policies in the future. Data may also provide the community police agencies serve with insights regarding decision-making processes for officers under stress and information to lead to police reforms.

This chapter includes the research and design rationale for this study, research questions, he trole of the researcher, methodology, participant recruitment and selection, concerns regarding trustworthiness, and ethical considerations.

Research Design and Rationale

Research involves understanding a particular phenomenon, and the researcher needs to look beyond what is obvious to find factors which influence the phenomenon as well as underlying causes, correlations, and preconditions (Stake, 2010). Data collection and interpretation by themselves will not solve a problem, but data can be used to accept a particular type of reasoning (Stake, 2010). This study was designed with the purpose of understanding how common methods of firearms training influence officers' decision-making abilities and contribute to the body of knowledge regarding police firearms training policies.

A qualitative phenomenological design was used for this study and the data interpretation was narrative rather than statistical. I interviewed officers regarding their experiences concerning police firearms training policies and identified types of weapons training that were employed when deciding when it is necessary to use a weapon during an interaction with a suspect and its relationship with conflict decision-making. For this study, the phenomenon of stress during decision-making was examined to identify factors which influence officer decision-making.

The quantitative methodology was not sufficient for this study as I looked to address lived experience of officers in terms of their knowledge and application of knowledge as well as the effects of stress and application of agency policies. In order to fully examine the individual experiences and perspectives of officers, the qualitative method was needed since statistical and numerical data cannot provide insight into an individual's experience.

By examining the phenomenon of police decision-making under stress during a shooting, further identification of firearms training policies can add to the existing body of knowledge to improve training. The case study method was not an appropriate option for this study as the narrow focus of case studies, either on a singular event or the individual, was not sufficient to provide a broad enough view of the phenomenon.

Research Question

The research question is an important factor in research, particularly in qualitative studies, as the research question influences the design and methodology. The research question itself is also important in terms of the relevance of threats to validity, the capabilities of addressing identified threats, and overall feasibility of the methodology (Maxwell, 2013). The central research question of this study is: From the perspectives of police officers involved in shootings, what elements of training influenced their decision-making in real-life deadly force encounters?

For the purpose of this study and in order to have a better understanding of why police make the decisions they do during deadly force encounters, it was crucial to understanding what influenced training and decisions in relation to real-life shootings. With stress being identified by Janis and Mann as a major influence on decision-making and a critical element of Janis and Mann's conflict model of decision-making, further due to its impact on the decision-making process examination of how training influences stress-based decision-making will be used to address decision-making during deadly force encounters. Scenario-based training was identified in the literature review as the best method of training to address stress inoculation. I addressed how training affected

police decision-making and identified actual elements of training which were useful and can be used to develop training policies involving scenario-based training and improving decision-making when under stress.

Role of the Researcher

According to Denzin and Lincoln (2003), the researcher is the primary data collection instrument. The researcher must be aware of biases and refrain from making statements which are immoral, political, or provide information that supports or contradicts the overall research.

This involves asking questions which provoke insightful conversations in environments that make participants comfortable and willing to express themselves in an honest and forthright manner. The researcher must be an active listener and be aware of facial expressions, body language, and voice inflections of participants in order to analyze the research.

I was the guide for my participants. It was important for me not to project my own biases in even the most casual way. I had to accurately represent what participants felt and not personal emotions which were exhibited during interviews. As a working law enforcement officer in the area where this study took place, there was a chance I may have interacted with participants at some point in a work-related environment or was familiar with a shooting they were involved in. I am also a supervisor in my agency. For this study, I did not address the rank of participants, who represented a range of professionals with lesser, equal, or higher-ranking positions compared to me. It was important I emphasized that these interviews were confidential, voluntary, and for

research purposes only, and I did not have any influence on any working or personal

relationships. Participants who had more than a casual working relationship with me were

not chosen as participants to help alleviate issues of bias.

My role as the researcher in this study was to conduct interviews with each of the

participants. This was accomplished using a set of questions that are consistent for each

participant with responses recorded by audio. The audio was summarized by me. The

relationships with the participants varied. Some of the participants were past, indirect co-

workers who I did not supervise and others were law enforcement professionals I may

have had a casual working relationship. Participants were not used if they were

considered or considered themselves to be supervised by the researcher. Criterion

sampling was utilized for selection and I did not introduce myself by rank but as a Ph.D.

student conducting a study. No promises were made and participation was purely

voluntary.

Responses were kept confidential and were not shared amongst the participants. It

is an ethical challenge for a researcher to ensure the interaction between the researcher

and participant as the participant is typically used as an instrument during the research

(Creswell, 2007). Guidelines must be established by the researcher and following

standardized guidelines, there were no identified ethical issues for this study.

Participant Selection Logic

The sample was comprised of officers from the nine law enforcement agencies in

the region of this study. A purposeful sampling method was used to recruit at least 15 to

20 officers, male or female, of varying experience levels, who meet the criteria of the

study or when saturation is met. The inclusion criteria for the selected participants was chosen based on the need to gain insight into the experience of officers who have been involved in an actual police shooting and who have all trained in a similarly in their agencies prior to their shootings. The primary focus of this study was to examine the perceptions of participants about their training experiences to identify what elements of training led to better decision-making in real-life encounters. Criteria included (a) officers who are members of a state or local law enforcement agency in the region of this study who were involved in a police shooting that has been cleared through the agency's internal affairs section and has already been through the court system,(b) participants who have been through the form of firearms training is mandated by their agency, but may have had other experience with firearms training as it is still an element which affects their decision-making, (c) the participant's shooting was an on-duty shoot.

While many of the concepts for the deployment of a firearm are similar regardless of being an officer on-duty, off-duty, or a civilian defending themselves, the need for this study was to understand on-duty shootings where they were acting under agency policy. The officers may have either been acting in uniform or in plain clothes capacities, such as detectives as they are acting under agency authority at the time regardless of uniform, although this will not be ignored if elements regarding uniform show a pattern or theme during analysis. The focus was to determine what elements of firearms training better prepared officers for their shootings, not to eliminate elements of training as harmful for this study. The purposeful sampling based on the identified criterion aligned best with the desired focus of this study. There were no noted exclusion criteria.

The use of a sample size of 15 to 20 participants was chosen for this study with 16 ultimately being interviewed to reach saturation. The use of the smaller group according to Patton (2002); Smith et al. (2009) is more favorable for a qualitative study as it improves the reliability of the study by reducing generalization, and ensured the validity of the content with more in-depth data from the participants. While deadly force encounters are unique to each officer, the choices for response are limited regardless of the agency policies as they are all grounded in case law, CRS, and legislation. Due to this, the saturation level of 16 participants was reasonable as the number is low enough to allow proper coding but large enough for repetitive themes to emerge. The willingness of participants to relive traumatic experiences honestly is important, and there is some minor emotional stimulation expected. If an issue had arisen during the interviews, the participants would have been able to opt-out of the study and interview at any time. With the number of police shootings in the region of study over the last decade, there is a large sample pool to choose from and willing participants will be abundant enough to reach the number of participants needed for saturation.

Participant Recruitment

The participants for this study were located by using an open email invite for participants from the region of study police agencies who met the mentioned inclusion criteria. Emails were obtained from publicly available agency emails with a request to forward to all sworn officers in each of the agencies with officers meeting the criteria described in the invitation letter being invited to respond. The use of participants from multiple agencies in the same geographic area based on the need understand the real-life

experiences officers had with firearms policies and real-life shootings, will have come from varied agencies in the region who have their own nuances for firearms training, but generally consistent policies, and have had at least the basic academy and in-house agency training. The experience level included all officers who were out of their basic training to veteran officers to ensure all experience levels are represented.

Officers are interested in areas where their training can be improved as it is typically monotonous and does little to improve skills (Stringer, 2010). With the push for further police reform in Colorado, the implementation of House Bill 2017 was done without input from officers or agency leadership which caused concern for officers in Colorado. The willingness to participate in this study by officers was encouraged by the opportunity to have their voices heard and their input potentially having a meaningful impact on future police reform efforts. As mentioned earlier, the critical incident feedback loop is not done well within agencies and there is little opportunity to learn from mistakes other officers make during shootings. Officers taking part in this study had a chance to reflect on their shooting from a perspective of learning rather than from criticism or concern from an internal investigation. Officers were further motivated to participate as they are interested in training where they can be involved and see a positive outcome (Clark & Mayer, 2009). Law enforcement agencies in the region of study benefit from having an option to use a centralized basic police academy run by the sheriff's office in the region of this study meaning officers from many agencies have been through the same firearms training program which utilizes past cadets officer-involved shootings as part of the learning program. Officers in the region of study will be

more inclined to share their stories as this manner of learning was already part of their early learning experience with firearms training. This study, as presented in the invitation letter, offered officers an opportunity to have a potential impact and shape their own future training.

The emails sent out included an invitation letter covering the basic purpose of the study (Appendix A) as well an Informed Consent for the study (Appendix B). A search of the publicly available records was done on respondents and copies of the police reports obtained through public records to verify they were in fact in an on-duty shooting, the shooting was in the geographic area of the study, and that the shooting has been fully adjudicated through the court system. If enough respondents to complete the study were not located through the mentioned methods, considerations would have been made to expand the invitation to agencies surrounding the region of study. The researcher would have looked at agencies of similar traits to the agencies in the region of study for consistency.

When participants emailed back with an initial interest in participation, follow-up was done by phone or email based on preference, where further details of the study were provided and confirmation of the participant's desire to participate in the study will be confirmed. Once participants agreed to take part in an interview their preferences, in person or video conferencing, were scheduled based on a date and time they preferred. For in-person interviews participants were allowed to choose a location that they were comfortable with and provided privacy so the conversation could not be heard. The interviews were recorded using a digital audio recorder unless the participant did not

want the interview recorded. In this case, the interview was transcribed by the researcher while the interview is being conducted.

The participants did not identify themselves by name on the recording, only by a number assigned by the researcher to identify the participant for future review and coding of the interviews. To further protect the identity of the participants, the researcher instructed the participants to withhold any information which can identify them, such as the agency they work or worked for, exact times and dates of incidents, exact locations of incidents, names of suspects, names of other officers involved, and any similar details which may be an indicator to identity. A complete review of questions and answers was done at a later date and after transcriptions were completed, with the participants to confirm the accuracy of the answers and to ensure they were not interpreted by the researcher incorrectly.

Instrumentation and Data Analysis

The settings for the interviews were face-to-face or video conference interviews with the use of a pre-established, semi-structured interview guide (Appendix C). Data was collected using a researcher-developed interview guide to conduct face-to-face interviews. For data analysis, the use of coding software, Atlas. ti 9, the latest version of the software at the time of this study, was used to analyze interviews and identify key codes, themes, and phrases in the interview in relation to Janis and Mann's decision-making model.

The use of the coding method was needed to link the data and explain the data concerning Janis ad Mann's model (Smith & Osborn, 1999). The coding was a multi-step

process that helped translate what was happening with the data and an understanding of what it meant.

All the responses from all participants were recorded and transcribed or recorded in Zoom and transcribed based on the participant's preference using Atlas. ti 9. The researcher identified common themes, phrases, declarations, or common ideas in relation to the experiences of officers with firearms training policies and application in police shooting in the region of study. With a phenomenological approach, the experiences of the interviewees were captured by answering the interview questions and any follow-up questions which may arise and the information gathered was analyzed and common themes identified. The coding was done using QDA software, Atlas. ti 9. This is due to the smaller sampling size and the use of a theme analysis and topic emergent method. Atlas. ti 9 was used to build tables of questions and answers placed within. The participants were placed in rows using a number reference without names to protect their identity. Questions were placed in columns and a matrix system utilizing the Atlas. ti 9 to manage common themes of responses. This helped ensure and clarify the similarities and differences in the participant's answers.

The research questions were designed by the researcher and all participants were asked the same set of initial questions. Follow-up questions were based on the participant responses, but consistently related to the focus of the research. The questions were designed based on key elements identified in the literature review. The final questions were designed to provide answers to issues concerning the phenomenon.

To ensure validity and reliability, I verified answers to participants after they provided their answers to ensure I had a proper understanding of their experience. The human factor of the participants was considered as well as the factors of participation, recruitment procedure, and data collection participants. I considered the participants as an important resource that provided data in a confidential manner.

All information collected from participants met IRB policy and standards. The data was stored in a secure location. As participants were interviewed, the responses were recorded so that an accurate representation of participants' responses of commonality or theme could be acquired. Responses that represented a discrepancy were also noted and used to complete the data analysis.

Issues of Trustworthiness

Several guidelines were utilized to ensure that the findings were credible. The responses and transcripts were reviewed with the participants to ensure accuracy and provide opportunities for clarification or change (Creswell, 2007). This allowed for the final conclusions from the 16 interviews to provide credible data for the study (Guba & Lincoln, 1989).

Credibility

The credibility of data collected during a study is crucial to the overall credibility of the research (Trochim & Donnelly, 2006). It was important to ensure the responses from participants are accurately represented. The participants were allowed to look over transcripts and coding for their responses to ensure accuracy. The participants were

allowed to clarify or change anything in which they felt they needed to for accuracy or clarification.

Further credibility was achieved through the proper alignment of the methodology and conceptual framework (Ravitch & Carl, 2016). From a phenomenological approach, it was believed that the issues with firearms training and its relationship to decision-making by officers during shootings will be found by exploring the lived experiences of officers. This method for use of a phenomenological design has been established and tested by numerous researchers.

Transferability

Transferability in a study will be achieved when the concepts from data collection from one group of participants, can be representative of another group when a similar circumstance occurs (Saldana, 2016). While this study focused on police agencies in the region of study, it was representative of any area with small to mid-size police agencies. Further application to larger agencies could be done as the increased number of officers tends to lead to an increase in comparative incidents for the area. This study should provide an accurate representation of multiple types of American policing agencies. The interviews focused on particular types of policies and particular firearms training methods used by the participants. Interviews were from officers in the region of the study, but were not generalized to any particular geographic region allowing the study to be further explored in other areas (Creswell, 2007). The issues with police reform and police qualification policy requirements are universal for all law enforcement entities on

state, local and federal levels. The themes exposed in this research should be recognizable by anyone in law enforcement and law enforcement policymakers.

Dependability

The research and investigative process were documented with accurate recordings of any developments as they begin in the process. Location of interviews, decisions made, methods of recording, and all issues were documented with a focus on respect for the participants (Creswell, 2007; Guba & Lincoln, 1989). As the researcher, I was responsible for documenting any issues which could have created conflict for the information gathered. All participants received the same questions and were interviewed in a consistent manner (Trochim & Donnelly, 2006).

Confirmability

Conformability was achieved by keeping personal bias, including the researcher's own experiences in law enforcement and firearms training, out of the study (Ravitch & Carl, 2016). Coding of the data was done by hand and there were participant reviews to ensure personal bias was not part of the coding.

Ethical Procedures

Upon the initial reply and agreement to be part of the study, the initial participant pool was established. A cross reference of participants to the reports for their shootings was conducted to ensure the criteria of the study were met. When final participants were confirmed they were provided a copy of the confidentiality agreement meeting IRB standards. Random numbers were assigned to all participants in the order confirmation of meeting criteria could be established to ensure that participant's personal information was

kept anonymous. With these safeguards in place, the researcher was able to address the ethical issues related to the participant's privacy, the privacy of their home agencies, and the materials for this study.

Along with the purposeful sample selection, no participant willing to be a part of the study was denied the ability to do so due to their gender, race, religion, rank, religious background, age, or experience levels. Participants were given a brief overview of the time they would have to dedicate to the interview, where and when the interview would take place, and the researcher's contact information. All documents were reviewed with the participants including the purpose of the study, consent form, voluntary consent for video or audio recordings, copies of the interview questions, and the right to withdraw forms. It was important for the study that participants felt comfortable taking part in the study and felt safe in their anonymity. All forms presented were done so under the approval of the Walden University IRB committee members. Participants were given copies of all forms if desired, and all forms were retained by the researcher if needed in the future. The researcher did not influence or coerce participants to take part in the study in any way and participants were free to withdraw from the study at any time in the process. None chose to withdraw. Participants were allowed to review the initial data collected after the interview as part of their exit process. Any discrepancies were noted and corrected.

A unique ethical issue associated with this study was the need for officers who were involved in traumatic experiences to relive these events as part of the interview process. With this factor in mind, the researcher ensured this factor was brought up in a

straightforward manner while gaining initial consent. The researcher also paid special attention to signs of emotional distress before during and after the interviews with the interviews being stopped at any time there was a potential issue noticed. No issues were noted by the researcher or reported by the participants.

Summary

Human reactions to dealing with high-stress situations are complex, with multiple factors which influence how they deal with situations. Police training policies dealing with deadly force encounters are varied, complicated, and in some cases lacking, but are an important part of the process for developing responses for officers to deadly force encounters. While this research has limitations and I did not identify a definitive solution to all firearms training policy needs for every agency, the subject matter was extensively explored by me as thoroughly as possible.

This study was designed to understand officers' experiences with firearms training policies and the effects they had on their decision-making process. This design also allowed for a better understanding of where training was effective and how this may be used for policymakers to design more efficient policies in the future by using participants' descriptions of experiences.

I identified that while studies have been done on firearms training, police policies, adult learning, and decision-making under stress, this study is unique in that it involves training via lived experiences. Identifying what training was useful, officers' perceptions of how training was used to identify readiness in terms of real-life encounters, and how

officers felt training could be better used added to the body of knowledge involving police firearms training policies and ultimately police reform.

      This study has many implications for police reform, including improving police training and officers' decision-making skills, and changing what police agencies consider qualified to determine police readiness. This has further implications for generating trust between police and citizens by potentially decreasing the number of police shootings.

Chapter 4: Results

Introduction

The purpose of this study was to examine the experiences of police officers in the region of study who had been involved in deadly force encounters to gain an understanding of past training methods that led to successes or failures in real-life situations. By understanding this, a better model for determining officers' abilities to make sound decisions involving firearms deployment in stressful environments can be developed and implemented via training policies. To address the gap in the literature concerning police firearms training and the need to develop a more comprehensive determination of officers' readiness to deploy firearms on-duty, I used a phenomenological qualitative design. Examination of perceptions of officers and their training experiences and how they affected their decision-making during real shootings may allow policymakers to address the number of police shootings by creating training policies that show officers how to make better decisions. I sought to address the following research question: From the perspective of police officers involved in shootings, what forms of training influenced their decision-making in real-life deadly force encounters?

Chapter 4 includes the setting where the study took place, demographics of participants, data collection and analysis, evidence of trustworthiness, and results of the data.

Setting

Research participants were given the option of face-to-face interviews or via Zoom. Face to face was the preferred method, but due to COVID-19 issues during the time of this study, the remote option was offered to ensure participants were comfortable. Locations varied based on the desire of participants but were all conducted in areas where privacy could be ensured and conversations could not be seen or heard by anyone else. A total of 16 participants were interviewed, with 12 interviews done in person and four done remotely. Interviews were conducted over a 4-week period between March and April 2022 to ensure no participant encountered other participants. Consent was obtained prior to interviews being conducted. A researcher-designed interview guide was used (Appendix C) and a total of 16 interviews were conducted.

Demographics

Table 1 includes demographic data for the 16 interviewed participants. All participants were at least 21 years of age, the minimum age to be an officer in the region of study. The experiences of officers working in law enforcement ranged from 3 to 30 years. Ranks of officers included officers, deputies), upper middle management, commanders, and lieutenants at the time of their shootings.

Table 1

Demographics of Participants

#	Age	Race	Years of service	Rank	Sex
001	41	White	15	Sergeant	M
002	24	White	3	Officer	M
003	36	White	8	Officer	M
004	33	African American	6	Officer	F
005	52	White	30	Lieutenant	M
006	49	White	26	Sergeant	M
007	24	Hispanic	3	Officer	M
008	29	White	4	Officer	M
009	42	White	13	Officer	M
010	36	White	11	Officer	F
011	25	African American	4	Officer	M
012	28	Hispanic	3	Officer	M
013	27	Asian	5	Officer	M
014	27	Hispanic	6	Officer	F
015	25	White	3	Officer	M
016	31	African American	7	Officer	M

Data Collection

Initial recruitment resulted in 30 participants willing to take part in the study. 16 participants were chosen in the order in which they responded and the criteria were confirmed. Only 16 participants were interviewed as data saturation was reached and other potential participants were not necessary.

Potential participants who responded to initial email invitations were then followed up with via phone or email. The follow-up call or email consisted of verifying they met the criteria (see Appendix B) which I could confirm through the acquisition of available police reports and public records. Following confirmation, participants were contacted via phone or email a second time. Consent forms were reviewed and questions from participants were answered. Participants were given the option of in-person or video conference interviews. Twelve participants chose in-person interviews and four preferred video conferences.

The recruitment method was purposeful sampling. This method required that participants be selected based on my judgment as the researcher. Potential participants who responded to initial emails were contacted again by phone or email to schedule screenings for recruitment (see Appendix B). Following screenings, I provided further information on the study and reviewed the consent form, procedures, risks, benefits, voluntary aspects of the study, and confidentiality issues. I answered any questions participants had regarding the study. Participants were given an option to conduct face-to-face interviews, which was preferred, or video conferencing. In all cases, consent was

obtained at a later time before interviews were conducted in order to allow enough time for participants to make sure they wanted to be part of the study.

For in-person interviews, consent forms were collected at the time of each interview. For those who chose video conferencing, consent forms were collected by email before the interviews. Interviews were recorded with a digital handheld recorder for transcription and also the record feature in Zoom for remote interviews. No participants found an issue with being recorded. Of participants who chose to meet in person, six met me at their agency in secluded rooms. The other six met at local coffee shops that were near their location during slow hours when no one else was around to hear conversations. Those who chose to use video conferencing all used the Zoom platform.

After each interview was conducted, a debriefing session occurred where my process was explained to participants and I provided the opportunity to review transcripts to ensure accuracy once they were completed. Once transcripts were completed, they were provided to participants by email, and follow-up phone calls were made to ensure their accuracy. This occurred within 2 weeks of the initial interviews.

Process for Coding and Identification of Themes

A total of 16 interviews were conducted. All interviews were audio recorded with transcriptions done in Atlas. ti 9 verbatim. Various examples of body language, tone, and facial expressions, or for phone interviews, tone of voice, pauses in speech, and rate of speech, were noted and annotated in the final transcript. The recorded transcripts were listened to several times to gain familiarity and were transferred to verbatim transcripts

generated in Atlas. ti 9 with the written transcripts compared to the audio to ensure accuracy and corrections were made where needed. I included the non-verbal cues as they were notated during the interviews.

Transcripts went through multiple readings and assessments to ensure that the researcher was focused on the interviews and my thoughts on the subject were set aside so there would be no influence on the research. Statements that were significant in relation to aspects of training that influenced the decision-making during the officer-involved shootings and aspects of what helped create good or bad decision-making were distinguished and set for coding. Any phrases or keywords which emerged were also identified with selected supporting statements noted with direct quotes.

Protection of identities was achieved through the use of a numbering system for participants and the master list was stored in a secured location separate from the analysis files. Participants were numbered P001 to P016. P001 represents participant 1 and so on until reaching the last participant 16, P016.

Data were organized into digital files and the interviews were labeled by the corresponding participant's number. Any handwritten notes, transcript copies, observation notes, memos, and any other non-computer file elements of data were placed into a locked filing cabinet in the researcher's secure private residence. All correspondence was saved on hard files and erased from systems to future protect participants. Participants were also instructed to do the same on their systems if they chose.

The actual coding process was broken down into two sessions. The first session utilized NVivo coding to distinguish codes from data in the transcripts creating quotes from selected text and using it as a code name from Atlas. ti 9. As the main research question addresses the realities of the participant and their personal meanings, this type of coding is suitable to understand participants' actions.

After general codes were established, a second coding session aggregated the codes into relevant themes. The themes identified for this study included attitude towards training, training issues, experience, fear of litigation, and changes to training (see Table 2).

Codes

The purpose of this study was to identify themes and meanings of the lived experiences of officers involved in real-life shootings and how their training impacted their decision-making process. According to Van (1990), the phenomenological themes identified in a phenomenological study represent an identifiable structure of these experiences. Further description of phenomenological themes breaks them down into the elements of the experience of focus, an intransitive process, and a means to capture the phenomenon a researcher seeks to understand (Van, 1990).

As illustrated in Table 2, codes were determined from segments of data discovered in the transcripts over the course of several readings of transcripts. New codes were identified and added as needed until data segments began falling into already determined codes and no new codes needed to be developed. Table 3 illustrates specific

quotes from transcripts that developed into codes and eventually the main themes in the data.

Several steps were utilized which included reading the transcription of interviews, identification of significant statements, formulization of meanings for significant statements, organization of the meanings into themes, creating a description of the phenomenon, and the review of findings with the research participants.

Themes

This phenomenological study sought to identify key components in the experiences of officers involved in real-life shootings and in an effort to understand what elements of training policies affected their decision-making. Themes make up the components of these lived experiences.

These codes were further aggregated into the main themes recurring in the data. Table 2 outlines the development of themes from central ideas, to codes to the final identification of the following five themes. The themes identified were attitudes towards training, training issues, experience, fear of litigation, and changes to training.

Table 2

Theme Formulation

Central ideas	Codes	Themes
Learning is not the priority	Rushed	Attitude Towards Training
Focused on meeting standards	Priority	
	Inconsistent	
Inconsistent instruction/ Critiquing	Agenda	

Central ideas	Codes	Themes
Rushed Training		
Range mentality	Bad habits	Training Issues
Training is not based on real-life.	Limitations to response	
	Unrealistic	
Not learning enough skills outside of the basic response	Accountability	
Lack of Accountability for Poor performance	Follow Up	
Lack of Communication		
Years of Service	Confidence in abilities	Experience
Non-LE Training	Larger toolbox	
Other "Combat Experience"	Improved Decision-making	
Specialized Training		
Legislative Driven Changes to Laws	Coordination	Fear of Litigation
	Use of Force	
Acceptable Practice	Excessive Force	
Policy Violations	Common Practice	
Legal liability		

Central ideas	Codes	Themes
Out of Date	Equipment	Changes to Training
Lack of proper training tools and locations	Funding	
	Locations	
Outside Instructors		
	Bias	
Lack of funding		

Table 3 illustrates the review of transcripts data segments from transcript quotes

identified for central ideas and the specific codes which were developed from them.

Table 3

Theme Excerpts

Excerpt	Theme
"The focus is typically to hurry up through a qualification or stumble through a poorly run scenario." "With current lack of manpower agencies are suffering through, training has been tamed down with the goal that we can't afford to lose people."	Attitude Towards Training
"So much time is spent either qualing or doing drills based on gun handling because so many officers have trouble working their firearms correctly, that you pick up bad range habits….."	Training Issues
"The years on the job was the best experience. The cop I was after ten years was a totally different person from when I first started."	Experience
"…it all creates hesitation, and in my experience, hesitating leads to doing nothing and getting hurt, or rushing to a bad decision."	Fear of Litigation
"We have equipment that we do not train on except the bare minimum each year, but these are tools like less lethal	Changes to Training

that you depend on as an option to not shoot someone."

Evidence of Trustworthiness

Credibility

Credibility for this study was achieved in terms of how this research was conducted and the transparency of reported data. Several guidelines were used to ensure that the findings were credible. Transcripts were made available to participants once the interviews were completed and the transcripts could be completed within a week to a two-week timeframe. Any discrepancies or clarifications were gone over in detail with the participants and changes were made with the final approval of the participants. Participants were given ample time to review transcripts and changes. Triangulation included vetting participants against the available police records to ensure they met the criteria of the study and that the police shooting incidents did occur.

Transferability

While this study focused on officers in the region of the study, this study could be duplicated and applied to other areas in the state or country. The data collected in this study can be representative of another group when similar circumstance occurs and provide external validity to the study (Patton, 2002; Saldana, 2016). This study was representative of many types of common American policing agencies. The themes exposed in this research will be recognizable by anyone in law enforcement and law enforcement policymakers.

Dependability

The research and investigative process were documented with accurate recordings of all developments as they began in the process. Location of interviews, decisions made, methods of recording, and all issues were documented with a focus on respect for the participants (Creswell, 2007; Guba & Lincoln, 1989). As the researcher, I was responsible for documenting any issues which created conflict for the information gathered and no notable instances surfaced during the course of this study. All participants received the same questions and were interviewed in a consistent manner (Trochim & Donnelly, 2006).

Confirmability

Objectivity was a key component of conformability for this study. This was achieved by keeping personal bias, including the researcher's own experiences in law enforcement and firearms training, out of the study (Ravitch & Carl, 2016). The codes and themes for this study were utilizing Atlas. ti 9 with transcripts being confirmed by participants.

Results

The purpose of this study was to examine the phenomenon of police decision-making with a firearm under stress utilizing data collected from interviews of officers involved in shootings. This study identified there was a lack of research focusing on the experiences of officers involved in shootings and how their training affected their decision-making. With a theoretical framework based on the Conflict model of decision-making, stress having an effect on decision-making and proper experience or training

having an impact on how one handles stress (Janis & Mann, 1977), the goal of this study

was to identify areas where training policies could be shaped to have an impact on

decreasing police shootings.

Table 4 illustrates the five main themes and definitions for each theme based on

the experiences of participants and how they explained their experiences to me.

Table 4

Theme Definitions

Theme	Definition
Attitudes Towards Training	The manner in which agencies conduct their firearms training, the way it is instructed, and how officers perceived their training was conducted. The focus is more on the philosophical and procedural process of training.
Training Issues	This refers to areas that created good or bad decision-making based on the perception of the participants. The focus is on the participant's perceptions of the technical aspect of training.
Experience	Experience which participants identified as affecting officer's ability to make decisions, whether from training, time on the job, or other experiences which helped their development.
Fear of Litigation	Fear of litigation for this study refers to officers fearing getting in some kind of legal trouble or internal policy trouble for taking action. This is either from actual events or fear of events leading to violations.
Changes to Training	Changes to training referred to areas where training was conducted in a good or bad way in relation to the logistical aspects of training policies

Results are broken down by theme and representative quotes of participants related to identified themes from data collection and analysis.

Themes

Theme 1: Attitude Towards Training

The theme of attitude towards training in this study is described as the manner in which agencies conduct their firearms training, the way it is instructed, and how officers perceived their training was conducted. The most prevalent codes included, rushed, priority, inconsistent, and agenda. All of the participants had some kind of negative view of how their training is handled, with variances in the degree of negativity and these elements came through mostly in interview answers to what hindered their training, and what agency training consists of.

For the code of Rushed, there were several key factors participants repeated. Participants perceived training to be rushed for the sake of getting people through it for the sake of meeting hours. According to P002, "Training is always rushed with a focus on getting everyone through it rather than doing training that means something or is useful." P012 detailed more on how their agency handles training stating, "The focus is typically to hurry up through a qualification or stumble through a poorly run scenario to get people through." P016 further explained, "The scenario training we do is the first thing put off when something else comes up. Even when scenario training is done, it is hurried, the instructors focus on one thing and have set way in their mind how it should go, so even if you do well, they complain it wasn't done a certain way."

Inconsistency in training methods was a common code identified from participants' statements. P001 said "Training tends to be inconsistent. When we have time and have a good instructor who has some credibility and is consistent with their message, training can go a long way towards creating better decision-making. When you have a two-year cop, telling a 20-year cop who has a decade of military experience as well that they did something wrong in a scenario, but really can't provide a good explanation, then it really ruins the whole learning experience." P009 said, "Sometimes there are some fun tactical shoots once in a while, where you shoot around cars, or get to move around some, but typically you get to go through it once, get critiqued, and then don't get to go through again and apply what you learned. It ends up being a shoot for fun, but little educational value so a lot of time is wasted on these kinds of training days." P005 stated, "Instructors can be inconsistent so one will tell you did it right, then you do the same thing with another instructor, they tell you did it wrong."

The code of "Priority" stood out as all 16 participants felt that training for anything other than qualifying was not a priority in their agencies. Within the elements of priority discussed, most participants felt the priority of agencies was to deal with mandatory training for the sake of meeting requirements rather than improving training. Participants referenced priority in relation to statements about certain types of training and the priority of accountability. P010 stated, "Officer survival training, a scenario day, is always promised, but we rarely get to actually do it. Due to other things going on, it is usually cut short or cut out completely and this is one of the days where you really learn something more than just shooting the gun."

P015 felt that agency "Priority" for training was focused on meeting mandates rather than improvement, "The biggest priority is the mandated things for POST. People get the bare minimum of training and then they take vacation or call in sick any training days beyond that. Some even hate being watched by others in training so they purposely skip training days. Supervision does not do anything about it." P003 stated, "While there is four hours of training allotted to each quarter, the training usually consist of shoots or qualification where you realistically train for 20 minutes and spend the rest of the time waiting for your turn. While you may be at training for four hours, you're not doing anything for most of it." There was a consensus, while varied by which agency the participant came from, that training was usually set up to prioritize getting officers hours, a certain number of hours, and not gain a certain skill or knowledge base. P007 in reference to this said, "We spend time waiting and only actually train a short time so everyone can get done during a certain time. Even when the training is good, there is no way anyone can retain anything and certainly not get much out of it when it comes time for the real thing and they can't think because they are scared."

Some issues with priority discussed by participants and were related to training not being a priority of the supervisors. Participant P005 said, "Officers don't care about training because the supervisors don't even take it seriously." P009 furthered this thought by stating, "…they (the supervisors) are on their phones or talking, or not paying attention. If they don't bother to take it seriously, then no one else is gonna." P008 felt, "The bosses want new ideas, but when they are brought to them, if it's too far out of the norm, then they shoot it down." P004 stated in relation to trying to get trainers to try new

things, "The training staff loves ideas if it's their own, but shoot down anything anyone else that's not their idea or is different."

The code of "Agenda" came out through participant statements that their agencies had certain agendas regardless of what written policy training policies stated. As P006 discussed in the previous section of training as "going through the motions", they also stated, "Really there is an agenda with training after the academy and that is to meet standards, not improve performance." P005 furthered this thought stating, "With current lack of manpower agencies are suffering through, training has been tamed down with the goal that we can't afford to lose people." P010 also perceived that agency agendas were impacting the quality of training stating, "We have had continuing issues with proficiency on the range and in training to the point the administration changed policies to make it easier so people are not put on leave or stuck in remedial training." P001 also perceived policies in their agency being run by a certain agenda to get the training done stating, "I know there are times when I performed poorly in training, but I never really got my issues fixed until getting on other teams or went to outside classes. Training in my agency was more about checking a box rather than improving things."

Participants also noted that agenda was an issue with how certain training was conducted. P001 noted, "A lot of training is allowed to make up online through Police One or other training sources. Some things like driving to arrest control can be done and counted towards training. You can't tell me if the agency allows this then all they care about is checking boxes." P003 also had a concern with this trend of online certification stating, "With the new police reform legislature, the state made certain mandatory

training required for officers, but then had no set curriculum. Some people did it online, and others were in-person classes where they stumbled through material to meet requirements." P016 stated, "We had to learn about proper holds and restraints to combat in-custody deaths, but most people, including me, did it online and hit play and came back and did a stupid quiz and they called it good enough. And you expect that this is going to stop in-custody deaths when the training is handled like an annoyance?"

Theme 2: Training Issues

For this study, Training Issues refer to areas that created good or bad decision-making based on the perception of the participants. The most prevalent codes were bad habits, limited response, unrealistic, and accountability. The participants had the most insight into this area when asked what hindered or improved their decision-making, and the effectiveness of their training policies.

The code of Bad Habits stemmed from participants' statements in reference to training which instilled bad habits they experienced in real shootings. P002 stated, "So much time is spent either qualing or doing drills based on gun handling because so many officers have trouble working their firearms correctly, that you pick up bad range habits. In my shooting, I fired two rounds, took one step left just like a stage in our qualification, then stood there. This is just like a stage where we shoot two rounds at the target, then take a step left or right to mimic moving to cover, except I didn't move to any damn cover. I just did the one step like I had always done and this didn't get me near any cover. Had the suspect continued his actions and not given up, I would have been standing right out in the open right squared up in front of them."

P015 stated "There is a reload stage in the qual which you have to move pretty fast to fire the gun, reload and fire two more and it can be a pretty stressful stage. When I was in a shooting, I fired my gun at the suspect who was charging with a knife, and then after I fired two rounds, I dropped my magazine which still had plenty of ammo and started a reload for no reason. I was so caught up in getting the reload done, I let the guy keep running at me because I was screwing with my gun. I didn't even move and he ended up crashing into me." P001stated, "Earlier in my career, there were only so many ways typical training I have done taught me how to deal with certain threats. Later on, Simms guns and training simulator machines allowed me to do more dynamic training, move around, use the environment, things like that. During my shooting, this is what gave me an advantage as I was able to use my environment to approach the suspect from a position of advantage. The other officer on scene, a guy who never took training seriously, approached head on like he was walking down the range and was just lucky he wasn't shot."

P008 stated, "You get in a bad habit of trying to shoot fast when the target turns, but there are not enough drills with decision-making on the range." P010 also alluded to responding to the stimulus of a turning target creating bad habits stating, "When I shot someone, they supposedly were armed with a gun and I approached them from behind. They turned and I shot, hitting the guy. While he did have a gun, looking back, my decision to shoot was reaction rather than a decision. Luckily they were armed and did have the gun in their hand, but if they hadn't, I'm not sure I would not have shot out of habit." Participant 005 also perceived the lack of training not related to qualification

being an issue stating, "Training in my agency has started incorporating more scenarios and it was clear that the less experienced officers were much more likely to shoot no-shoot targets in scenarios versus the more experienced officers. As a firearms instructor for years myself, I have seen scenario training combat the bad habits on the range for myself and my officers."

Many participants identified bad habits in terms of the limitation of range mentality, referencing doing things based on the rules and limitations of shooting on a flat, one-directional range. P014 stated in relation to unrealistic, "We spend a lot of time on qualification which is great for passing qualification. It doesn't do anything for making me ready to get in a shooting. We just shoot at a silhouette from different distances and don't need to do anything but wait for the target to turn." P003 in reference to limitations on the range stating, "There are drills you can't do realistically because of safety, and you always have to have your gun pointed down range, when in reality. You are moving around, running with your gun out, pointing it in various directions and you just can't do this on a typical range setup." P009 thoughts on range limitations identified the types of targets used stating, " I went to a school and all we used was 3D dummy targets. These targets could put things in their hands and you got much better at recognizing something in a hand rather than a picture on paper targets and you could move around them at different angles. There is a huge difference in identifying threat targets quickly like this than shooting at a piece of paper you've seen a dozen times before."

The code Unrealistic applied to statements where participants discussed the shooting environment in real-life compared to training conducted. P004 stated, "We do a night shoot once a year maybe, which is mostly focused on a quick shoot, sometimes 10 rounds with a little target identification. In reality, we work depending on the assignment, two-thirds to the entire year working at night." P001 said, When we do scenarios or shooting, we do not work at night much. I really had a hard time in my shooting because it took me some time to ID the threat because I don't think I was using my flashlight right. It was washing out the suspect with the bright area of the light because I did not think to move it slightly off to see better." P013 also had issues in their shooting due to lack of night training, "When I first drew, I held my flashlight how I had been taught, but it had been a bit since I did any real firing and I was really messing around with the light and my gun more than I was focusing on the suspect. I missed the way he had his hands in his pocket on the gun at first because of this." P015 said "The training has not changed much in the last decade. We still do most of the same things we did when I first started and do not do realistic training. The course of fire even has you use a handheld flashlight when everyone has been issued weapon lights on their gun. There is a point to it, but it is not a realistic way we deploy our guns." P010 stated, "I try to go to a lot of training classes when possible because just shooting on a static range creates bad habits and the agency does not provide enough to get me home at the end of the night. You have to take training into your own hands to get better."

Participants felt that training affected their ability to choose various ways to respond to threats indicated in the code "Limitations to Response". P004 when

referencing this limitation in their shooting stated, "At the time I just reacted and got lucky, but looking back after having more experience, There were so many options I had to do something different that could of prevented me from having to be in the shooting in the first place." P009 felt limited in their response and approach to the area their shooting took place stating, "I really did not use my environment very well because most of my training took place on the range. Changing where I was standing, the position I was shooting from, just little things like that I could have done better if I thought outside the box more."

P007 stated that they had not done much training outside of the basic academy and field training stating, "I didn't have a clue what I was doing during my shooting and shot at a moving car coming at me, on purpose, and stood in front of it shooting. Luckily I moved because even if I had hit the driver, it would not have stopped the car from hitting me. I just did what I knew to do at the time which was square up and shoot." In regards to limiting response, P003 said, "Most of the training that translated to real-world situations for me, had to do with more scenario or the simulator training. It allowed me to take the stuff from the range, and then put it together with other skills to perform better in real-life."

Participants felt that there was a lack of proper critiquing and information sharing with incidents represented in the code for Follow Up. P003 stated, "We never really hear about shootings afterwards. We debrief things all the time when it comes to regular calls, but when someone gets in a shooting, we never take the time to talk about the good or bad from it." P011 stated, "I have learned from mistakes more than anything, mine and

others, but if a shooting is cleared, we never break down the incident in a group and figure out what went right or what went wrong." P004 also felt that their agency did not take the learning opportunity from shootings stating, "Even when an officer does something legal, but could have done a better job, we avoid talking about to spare feelings. If we never talk about things, then how do we improve?"

Within the same vein of critiquing participants felt that praising only the good and ignoring the bad creates an unspoken standard in agencies. P016 said, "Someone can do something heroic, but could have made a lot of mistakes while doing it. People are too worried to say anything because they don't want it to take away from what they did. Then younger guys see this and think that the mistakes made are just the way we do things." P001 stated, "In SWAT, everything is hot-washed and we go over the good, the bad. We are brutally honest about it and are expected to have thick skin, but dealing with the issues is what makes us better tactically than the regular cops. It's not because we are so awesome, it's because we identify issues, change things that are wrong."

"Accountability" was a code based on the participants' perceptions that lack OF accountability for performance in training attributed to officers' poor decision-making. P005 felt training without having to meet some level of performance was an issue stating, "Scenario training is good, but it's kinda done in a way where everyone gets a participation ribbon. There are no consequences for doing poorly, so poorly someone shoots 4 unarmed people, they just talk about it then move on. No remedial, no consideration for fit for duty, just trying to get everyone through it. It's pointless and you spend a majority of the time sitting around waiting to go through a 30-second scenario."

P003 stated, "All the agency cares about is you passed the qual. You pass that, no matter how poorly you do in anything else, they don't care. The same people who screw up training, show signs of excessive force, or cowardice, are usually the ones who get hemmed up in an IA (Internal Affairs), or fired or screw up somewhere down the line."

Accountability was also referenced in agencies conducting training in a manner in which it catered to poor performers. "We end up doing the same thing over and over again and the instructors say it is because we have to cater to the worst skilled officer." P009 stated, "We never allow the more experienced officers to build their skills and do more advanced training because they are worried about hurting the feelings of those who would be stuck doing the basics. It holds everyone back." P010 spoke of specialized units' performance expectations stating, "We do more of the training in specialized units and the members have to live up to those standards to remain on the team. In the regular training, the standards seem to drop to ensure people can pass, or they just don't hold anyone accountable for doing bad."

Theme 3: Experience

Experience for this study refers to anything which shaped the officer's ability to make decisions, whether from training, time on the job, or other experiences which helped their development. The codes identified were confidence in abilities, larger toolbox, and improved decision-making. The code of confidence in abilities came from statements mostly from the interview question, "What elements of your training (such as marksmanship, shooting and moving, scenario, decision-making, weapon manipulation, etc.) help you make good decisions during your shooting?" Participants opened up about

a variety of training and life experiences both in and out of police work. P005 answered, "The years on the job was the best experience. The cop I was after ten years was a totally different person from when I first started." P008 stated, after mentioning several shootings they had been involved in both military and law enforcement, "Being in these incidents was more education than any day on the range. The shooting I discussed with you went well because I had learned from doing poorly, and being scared and not having any damn idea what to do." P009 had a similar sentiment stating, "I was lucky I had been a cop for a while and had been in special units for a while because I was able to perform on instinct and make good decisions because I got to go to more training than my coworkers working regular assignments." P012 said, "I made several bad decisions in my shooting because it happened when I was brand new just a few months out of training. I can think of several things I could have done better but had no idea at the time. The training in the academy and in FTO (Field Training) was good for a foundation, but is not enough to fully transition to getting into a shootout on the job."

P007 in reference to what improved their decision-making stated, "After several combat deployments in the middle east, I had a pretty well-established experience dealing with stress. I already had a confidence in my ability to deal with sudden stress and make quick decisions under stress." P005 had a similar inference about their past police experience in another agency, "I came from (large west coast agency) where it was really busy and you pulled your gun a lot at work. It was pretty engrained to pull your gun and make a decision in my shooting here because I had done it so much and had gone through making good or bad decisions." Participant 003 stated, "We did a lot of scenario village

type work in the military and had huge facilities to work in and run scenarios. My agency does not have those types of facilities and working in those places did a lot to build up my confidence to be able to deal with quick decision-making by cramming a lifetime worth of scenarios you could come across into a week's worth of training."

P009 stated, "Most of the training on regular duty was just going through the motions. I got my best experience from SWAT training. I have been a part of SWAT for 8 years and the difference in training is that it is taken seriously, there is a lot of scenario-based training, and if you do poorly, you pay for it. It may be remedial; it may be off the team. This kind of environment is where I learned the most skills to survive my shooting." P011 stated, "I came from the military as an Army Ranger and served overseas on two deployments. The training we did for the military, complete wargames, role play type stuff, was made a priority and you were expected to perform to standards. The law enforcement side is much laxer where people are constantly allowed to perform under standards, but there is no real consequence. Training and performance is not the priority in my law enforcement experience."

All participants mentioned scenario-based training or reality-based training in various forms as a means to improve experience. P015 when asked what improved their decision-making stated, "Scenario training helped me more than anything. My agency does consistent scenario training and this made a big difference with me because, in my shooting, I had done similar things in training so many times that I knew what to do and still was scared, but was able to fight through it better." P004 concerning simulator machines stated, "We try to use the TI (training simulator machine) incorporated into

training and when it's taken seriously, lets you play through a call from start to finish. Since there are different outcomes, it gives you a chance to deal with more serious things than you would most days on duty."

P012 who was just out of training during their shooting stated, "We did a bunch of scenario days and used the simulator machine a lot in my academy and these trainings made me think more and recognize threats more than just point and shooting." P016 stated, "I learned more from scenarios and simulators because it was more visual and you had a chance to put everything together, what you see, what you hear, even the smells of the powder from the Simms sounds." P012 felt, coming from a younger generation, their cognitive learning was assisted by role-playing where they could do more hands-on learning. P011, also a younger officer felt that their decision-making was improved by training which they got to take a more active role in and had some, "buy into since they had to do it, could see the results of their decisions immediately." P004 stated, "I spent a lot of time training as a K9 Officer, way more than as a regular patrol officer. We did a lot of scenarios with the dogs, and even though my shooting happened without my dog with me, the extra training done is really what kept me from shooting another unarmed person during my incident. The situation was so similar to a training that I was able to think pretty fast and recognize the lack of a threat when a lot of others would have taken a shot.

Many participants referred to the incorporation of some kind of visualization of scenarios and working through them to build cognitive functions and improve decision-making. Many referred to them as "What if games?" P013 stated, "I had a good sergeant

who would take a couple minutes in briefings to play what-if games. He would throw out a scenario that was somewhat intense, and have everyone go through what they would do and why if they dealt with it. In my shooting, it was a few days after doing a briefing where the scenario was somewhat similar to my shooting. It was fresh in my head and I was able to make decisions real quick while I was pretty freaked out because of it." P011 said in relation to what-if games, "My district partner was always throwing out what-if game scenarios while sat and typed, at lunch, whenever. It was annoying as hell sometimes, but my good decision-making I had in my shooting was because of those stupid games. I reacted quickly and made a good call not to shoot because I had already been through it in my head. The whole thing was not foreign to me, it was more like déjà vu." Other participants had similar thoughts in this area with P012 having a unique take on building experience, "Ok, as dumb as it sounds, video games helped me. I play a ton of first-person shooter games, and I'm not sayin you wanna go running around like that, but some of it is realistic and in my shooting, the way everything was, was like right out of one of those games and I reacted without thinking and realized it after everything was over."

Participants also alluded several times to making better decision-making based on experience creating more knowledge to pull from under stress. The code Larger Tool Box stemmed from perceptions of participants referring to this concept. P005 referenced this term stating, "Between years on the job and getting to do a lot of scenario training on SWAT, my shooting went smooth because I had such a large toolbox of knowledge to pull from without even thinking about it." P015, "I think on the hands-on things,

scenario training, using the TI machine, anything where you had to make decisions and think, gave me a huge toolbox to pull from to make good decisions." P009 said, "The more training the better. I made good decisions in my shooting because I made so many wrong decision in training. I built my toolbox up to a point where I was confident, but not cocky in my abilities."

P013 stated, "Every time we get a new tool, the Taser, new baton, whatever, that becomes the go-to thing for every officer to use to solve every problem. As we get used to having all the tools and learn to incorporate them properly, I have, and I've seen, officers be much more successful with being able to escalate and de-escalate through their toolbox and do the right thing at the right time." P006 as an officer and a supervisor and having been a use of force and firearms instructor felt the ability to have a bigger toolbox and navigate through it made for much better decision-making. P006 stated, "In my first shooting we talked about, I never even had a less lethal option except for a big baton. Being new I reacted more than made an actual decision. Now, officers have this big box of tools from their voice to their biggest gun and they need to be able to use the right one at the right time. You only learn to do this with realistic training that gets you the experience in using these tools."

Theme 4: Fear of Litigation

Fear of litigation for this study refers to officers fearing getting in some kind of legal trouble or internal policy trouble for taking action. The codes identified for this area included coordination, use of force, excessive force, and common practice. Coordination was referenced by most participants concerning how their agencies dealt

with preparing them to use force with recent changes in legislation in the region this

study was performed. This area came up from most participants relating to what elements

of training hindered their decision-making. P004 stated, "I made some errors in my

shooting because I was hesitant to act. I was thinking more about how I was going to end

up violating (House Bill) 217 somehow rather than focusing on the armed suspect I was

dealing with." P007 said, "It's even harder to make a good decision now because my

agency has really not prepared the line level to deal with 217. We don't know if they will

have our backs or not." P003 stated, "We started adding body cameras and adjusting

things because of legislation changes, but the admin didn't coordinate how the line level

was supposed to do things. You can't make a good decision when you don't know what

is considered a good decision anymore." P006 stated, "…it all creates hesitation, and in

my experience, hesitating leads to doing nothing and getting hurt, or rushing to a bad

decision."

Use of force in general was considered a major area where decision-making was

being hindered by legislation for fear everything would be considered excessive force by

all participants in some form. P004 stated, "My shooting occurred right after the George

Floyd thing, with all the riots all over the country and I was so busy worrying about

getting in trouble that I did not use as much force as I should have and was totally using

less force fighting with the guy I shot, which resulted in me having to shoot him."

Officers not wanting to even put themselves in situations where they could jeopardize

their career was an issue that they were afraid of more than an actual confrontation. P016,

"You always have to be justified in what you do, but officers are making decisions to just

to do as little as possible to avoid dealing with it. My shooting could have been avoided if I had made a better decision to engage with the suspect sooner, but I was too hesitant and he was able to get the advantage." P014 stated, "I don't do anything I don't have to do anymore because it's not worth losing my job." There was a marked difference when officers spoke on this subject who had more agency support on the matter of use of force. P013's take varied as they stated, "My agency was pretty supportive and always got officers' backs when they were in the right. In my shooting, I shot at the suspect and missed, but the opportunity to grab them came up and I hit them as hard as I could without hesitation. If I had not, I may of ended up having to pull my gun and shoot him." When asked the follow-up of why they didn't hesitate P001 stated, "I knew I was right and I never was concerned about getting in trouble."

The code for Common Practice was derived from several participants discussing how their agencies' policies dictated them to deploy their duty weapons. P015, "That guy got the draw on me because my agency made us report whenever we drew our weapon. Had I pulled mine when I got that hinky feeling, the whole thing would have not escalated so badly." P006 discussed their feelings about changes to common practices stating, "There have been a lot of changes expecting officers to change how they do things overnight and we cannot automatically switch gears this fast." P005 as a supervisory officer in their agency stated, "While there were certain legal elements that changed how things were typically done, my agency has adapted policy without much in the way of guidance on how to implement the policy making it tough to let the line level know what is expected of them." P003 stated, "My agency didn't have cameras until it

was mandated right before my shooting and they implement them without preparing us for them. I hesitated in using force before and in my shooting even though it was justified because I was just not used to it."

Theme 5: Changes to Training

With varied training methods and applications in police firearms training policies, the participants' shared insights into what changes to training would help them be more successful. For this study changes to training referred to areas where training was conducted in a good or bad way in relation to the logistical aspects of training policies. The key codes identified for changes to training were equipment, funding, locations, and biased perspectives.

The code Equipment related to participants access to equipment as well as training to use available equipment. Available equipment was varied by agency and participants felt the available equipment had a major impact on their training and decision-making. P009 said, "My agency almost never does Simunition training because we don't have the equipment or funding for the ammo. These are some of the best training I do, but we just do it much." P011 said, "My agency has a ton of Simms gear and we try to do it every other month. I think that since we have done this, we have had all good, I mean cleared, shootings for years." P003 stated, "We get to use the TI machine a lot for new patrol officers and you get to see a lot of strengths and weaknesses of people under stress and figure out how to deal with it."

Participants also mentioned issues with equipment relating to the effects on decision-making and deployment of such equipment. P006 stated, in relation to making a

decision on weapon deployment, "We are issued rifles and we train maybe once a year with them compared to quarterly with the handgun." P009 also alluded to a lack of training with rifles saying everyone wants to grab a rifle at a hot call, but not a lot of them know how to work them very well. We need to train more." Equipment selection was also mentioned as an issue with decision-making as P001 stated, "We do not address deployment of certain weapons in different areas enough. We have a lot of apartment buildings where it is real tight and there is barely any room to move and someone will bring a long gun with them. They end up more focused on maneuvering it around than clearing things and are just not focused." P010 speaking about equipment being used incorrectly said, "My shooting was the result of the other officer not deploying their taser correctly which forced the guy to try to stab him." P008 stated, after being asked to clarify a statement about the lack of equipment affecting their decision-making, "We have equipment that we do not train on except the bare minimum each year, but these are tools like less lethal that you depend on as an option to not shoot someone."

Participants also noted several areas where the training for particular equipment was lacking from an aspect of cross-training. P008 stated, "We train to shoot, we train on less lethal, but we do not do enough transitioning from one to the other." P013 stated, "During scenario training, we are told to simulate less lethal if we think we need it, but it is as stupid as saying out loud we are deploying the taser. No mock taser or anything. In reality, you have to make a choice, draw the tool, decide to use it, or decide to put it away and then take out another tool. It's not just as simple as deciding to use something." P006 also perceived a lack of proper training with equipment in a realistic fashion stating, "We

certify with the taser by shooting two cartridges at a target every year. You don't learn anything about decision-making because, in reality, you are using the taser with a 300-pound drunk fighting on top of you or trying to shoot it around a corner at a barricaded party. I've almost pulled my gun instead of the taser in fights cause I just didn't train enough."

For the code of funding, the participants experienced several key areas in which funding for training led to issues with decision-making. P008, "Trying to get approval to go to a special class is difficult since the agency has a limited budget. The cost of travel is more expensive than the actual class so if you can't do it locally, you just don't get to go." From another perspective on funding for training, P010 said, "There is always mandatory training so tactical and scenario training gets set aside and there is not overtime money to make it up." P003 talked about funding training that helps improve decision-making is not a priority for their agency stating, "Anytime scenario days, more complex training, active shooter training is brought up, the first complaint is the cost and cost of overtime to do it and it is put on the back burner." P002 said concerning getting specialized training, "They always turn down the newer officers who put in for training, but those are the ones who need the training more than anyone."

P006 discussed how lack of funding for training led to training consistency issues stating, "We also skim on Simms rounds and set up guns with only a couple rounds in the magazine to keep from shooting too much." P008 had a similar perception of lack of funding for Simunition ammo and poor decision-making stating, "When you only allow a few rounds for scenarios, you get officers running out and doing unrealistic things

because they know they don't have too many options. This takes the seriousness of training and the realistic aspect of training and ruins it." P005 stated, "Active shooter training is great, but with the limited amount of Simms ammo, we end up doing real short scenarios and engrain it into our cops' head that situations will be over quick, which is not torching them to deal with it realistically."

The code of locations was assigned based on statements on training locations being a consistent issue participants perceived as having a negative effect on decision-making and training. The most commonly identified issues participants identified were lack of training locations and training locations that mimic the real world. P009 stated, "Finding a location to train for building searches and doing scenarios is difficult. There is no closely available training facility that has a scenario village or anything, so we have to always be on the lookout for buildings or houses we can use." P008 said in relation to this, "There have been times we cleared the PD (police station building) because we couldn't find anywhere to train." P005 brought up issues with the current views on law enforcement stating, "In the last couple years some of the schools were weird about letting us train because they are worried about having cops around their buildings."

P004 stated, "You don't have locations to train with things you run into around. We don't have common vehicles we work around, like trains or buses. We don't have parking lots full of cars, or buildings full of furniture and people. These are things you have to factor in before you use force, but we don't train in these areas."

Participants noted there were consistent issues with inbred training across the spectrum of the agencies due to the tendency to keep training and instruction in-house

reflected in the code Bias. P013 stated, "We very rarely have outside instruction in terms of firearms training." P004 alluded to a certain bias of instruction, "The instructors for skills generally run and develop everything and do not take input from others for training ideas." P009 furthered this idea when talking about getting approved to go to a class stating, "Anytime I have put in for training which was anything outside what we usually do, I have been turned down."

Bias perspectives were also perceived by participants as an issue instructors and how they critiqued performance and designed training programs. P004 "The instructors insist on reloading their way, and if it is easier for someone to do it another way, one that is established in other firearms programs, they harp on the person and make them do it a certain way." P015 stated when asked the follow-up why they think this is an issue after providing a similar answer, "It's because there is too much focus on doing things their way rather than letting people focus on building real skills." P008 stated, "Scenario training can be good or bad. If it is set up to mimic real-life scenarios, and there is a thoughtful debrief done, then it can be a great way to get some experience. The issue is, debriefs become more of the instructors trying to puff their chests rather than truly teach people how to think and perform." P014 furthered this thought by stating, "The instructors are not always those who have experience with doing these kinds of things. It's hard to take it seriously when you are being criticized by someone who is known as the laziest, scared of the dark cop on the planet, then they are jumping down your throat for how you dealt with a scenario. It kind of makes you tune out from the start."

Participants felt that there was a certain bias in training where the instruction and attitudes that are efficient for academy recruits and new officers, overlaps with regular agency training for the more experienced officers. P006 said concerning this, "Having been a cop for a long time, nothing ruins training more than an instructor who treats the regular recruits like a cadet. From harassment to name- calling, this doesn't cut it with the troops. P014 stated, "I get there are systems in place for new cops, but we tend to continue to treat the experience guys the same way rather than enhance training, it causes resentment and ultimately people stop paying attention." P005 said, "There is a difference between trying to improve someone or show them a better way to do something, and having people do things a certain way because you are the instructor and you say so. There is a lot more training out there than what I do, but it always stays the same because that's how whoever is in charge wants it." Participants felt that there should be more separation in training for improvement. P010 stated, "Let the folks who need the basics or have had issues to training to improve that, while those who are more advanced do more advanced training. By letting those who have better skills do more advanced training, this will trickle down to others as well. Let people evolve and as they get better or worse adjust training accordingly." P007 elaborated more on this thought stating, "One size fits all works in the academy. In in-service training, while you should always touch on the basics, people learn different and have different skill sets, and have different areas to work on. If you wedge everyone into one way to perform, that's all anyone will ever be able to perform like."

Summary of Interview Data

Data and themes answered the research question in several ways. The themes represented aggregated codes from participant statements with the overall idea that Janis and Mann's conflict model of decision-making and that training can inoculate against the effects of stress on decision-making. Each of the themes identified by participants was based on ways their training policies handled training and what aspects had created or hindered their decision-making during their officer-involved shootings.

Within the theme of Attitudes Towards Training, participants identified how training hindered or aided decision-making from the aspects of the way training was conducted, from the more philosophical and procedural levels. The theme of Training Issues was more specific to the technical aspects of training and how it influenced decision-making. The theme of experience identified areas of training as well as life experiences of participants and how these areas influenced officers' decision-making development. The theme of Fear of Litigations identified an area of training where a lack of preparing officers for ever-changing legislations created stress in decision-making outside of the life and death decisions typically associated with stress. The final theme of Changes to Training further identified the logistical side of training and the positive and negative effects on decision-making by officers.

The themes identified all answered the main research question as each theme was based on what participants felt influenced them in their shootings, all directly related to training, either directly, or indirectly. From this data, various recommendations can be made to improve training policies in the future to create better decision-making in

officers. No data collected was discrepant to the theories of the study. Participants'

experiences were consistent throughout the data collection about certain elements of

training and policies either helping or hindering their performance, but there were no

statements that were contradictory from one participant to the other.

Summary

This study involved examining training and how it influenced decision-making

for police officers in shootings. Data collected through interviews were used to answer

the research question. Themes were attitudes towards training, training issues,

experience, fear of litigation, and changes in training. Results of this study involved how

training and training policies were perceived by participants concerning to improving or

hindering their decision-making. Chapter 5 includes interpretations of findings,

limitations of the study, recommendations, implications, and conclusions.

Chapter 5: Discussion, Conclusions, and Recommendations

Introduction

The purpose of this study was to examine the experiences of police officers who have been involved in deadly force encounters to identify where their past training methods led to successes or failures in real-life situations. To better understand and address gaps in the literature, a phenomenological approach was used to further understand aspects of police training that affected decision-making processes among officers who had been in shootings. With a better understanding of what aspects of training improved or hindered officers' decision-making, policymakers may be able to develop training policies that will help decrease the number of police shootings.

This study was conducted with 16 officers in a particular geographical area in the region of the study who had been involved in officer-involved shootings. Semi-structured interviews were used to facilitate this study. While qualification-based training is the most used way to test and train for police firearms deployment, fast decision-making under stress is better addressed using more cognitive-based training (Anderson & Gustafsberg, 2016; Braga et al., 2017). With police reforms having no measurable impact on the annual number of police shootings (Jennings & Rubado, 2017), studies must be done to understand how training influences police officers' decision-making when deploying their weapons.

This study revealed that officers have a generally negative view of how their agencies train them. Participants stated the type of training that better prepared them was scenario-based training which was often a secondary form of training in police agencies.

Participants also noted scenario and simulator training helped them deal better with stress and make better decisions. All participants felt that agencies were not strict enough in terms of holding officers accountable for their performance during training, and there was not enough preparation to deal with quickly evolving legislation. Lack of funding, time, training consistency, and attitudes towards training were all factors that were determined to have both positive and negative effects on officers' decision-making processes during a deadly force encounter based on how training was implemented. In Chapter 5, the interpretation of findings is discussed and organized by individual themes and their relationship with previous research that was identified in Chapter 2. Limitations of the study are also discussed as well as recommendations, implications, and conclusions.

Chapter 5: Discussions, Conclusions, and Recommendations

Introduction

The purpose of this study was to examine the experiences of police officers who have been involved in deadly force encounters to identify the areas where their past training methods led to success or failures in real-life situations. To better understand these aspects and address the gaps in the literature a phenomenological approach was used to further understand the aspects of police training which affected the decision-making process of officers who had been in shootings. With a better understanding of what aspects of training improved or hindered officers' decision-making, policymakers may be able to develop training policies that will help decrease the number of police shootings.

This study was conducted with 16 officers in a particular geographical area in the Rocky Mountain region who had been involved in officer-involved shootings. Semi-structured interviews were utilized to facilitate this study. While qualification-based training is the most utilized way to test and train for police firearms deployment, research has shown that fast decision-making under stress is better served using more cognitive-based training (Anderson & Gustafsberg (2016); Ander et al. (2016). With continued efforts for police reform having no measurable impact on the annual number of police shootings (Jennings & Rubado, 2017), studies must be done to understand how training influences a police officer's decision-making when deploying their weapon.

This study revealed that officers have a generally negative view of how their agencies train them. Officers stated that the types of training that better prepared them were the types of scenario-based training which were often a secondary form of training in agencies. Officers also noted that certain types of training helped them deal better with stress and make better decisions. All participants felt that agencies were not strict enough in holding officers accountable for their performance in training and that there was not enough preparation to deal with the quickly evolving legislation. The lack of funding, time, training consistency, and attitudes towards training were all factors that were determined to have a negative or positive effect on an officer's decision-making process in a deadly force encounter. In the next section the interpretation of findings will be discussed, organized by the individual themes and their relation to what previous research identified in the Chapter 2 literature review discussed. The limitations of the study as it

was conducted will also be discussed as well as the recommendations, implications, and conclusion of the study.

Interpretation of Findings

This section will discuss the findings of the study as they relate to the body of research previously discussed in Chapter 2.

Theme 1: Attitudes Toward Training

This study increased the knowledge base for how attitudes toward training affect officers' decision-making. All participants felt that training was done in a manner that focused on getting officers through qualification and meeting the minimum levels for POST standards and more meaningful training was put off or not done at all. The more complex forms of training such as scenario-based training which studies have shown create better decision-making and stress inoculation (Augustine, 2020; Clark, & Mayer, 2009; Driskell et al., 2006) were identified by all officers as a non-priority in their agencies and the first training set aside when time constraints were an issue. All participants felt that even when training had a more cognitive aspect to it, it was conducted in a manner that was rushed, to get officers through it with a focus on quantity over quality.

Participants also felt that the instructors used by agencies were not always the best-suited or experienced officers causing officers in training to not take the training as seriously. It was noted by many participants that instructors may be good with entry-level officers but lost the attention and respect of more experienced officers due to their lack of

real-world experience. This study identified the need for the right instructor for the right

circumstances. While not directly discussed in any of the previous studies, there is a

relation to Alzate's (1998) interpretations of the loss of self-esteem and its relation to

Janis and Mann's decision-making model. Participants who were not comfortable or did

not take the training officers seriously were describing issues that affected their self-

esteem concerning the training. This can be dealt with by having the right instructors.

The issue of agenda identified seemed to be based on agencies trying to meet

standards. The participants' perceptions were not related to agencies setting out to create

poor training, but the need to meet certain requirements while dealing with variables such

as manpower, time, funding, and other resources. These issues exemplify an institutional

habit created from doing things a certain way for extended periods and either not

knowing how to, not initiating changes, or not having policies that provide direction for

these types of occurrences. The various efforts for policy and legislative efforts

associated with police reform as discussed in the literature review (Chapman, 2019;

Haskins; 2019; Jennings & Rubado, 2017) has shown that agencies typically try to fix

issues through policy and the government entities try to fix it through legislation. The

participants' statements in this study showed a need to change the agenda of agencies to

fix problems through proper training to allow officers to make the right decisions in the

first place.

The biggest issue identified by officers with training was the lack of consequences

and accountability for officers who performed poorly in the more cognitive forms of

training. Participants were consistent in stating that all officers were expected to pass qualification training or they could not be deployed for duty. No participants stated their agency's held officers accountable for performing poorly or even dangerously in scenarios nor did any kind of remedial training for officers who performed poorly. As noted in studies in the literature review, scenario-based training is a much more accurate representation of how one will perform under stress in a real-life situation (Anderson et al., 2016; Blickensderfer et al., 2012; Clark & Mayer, 2009). All participants felt that scenario-based training had better prepared them for good decision-making and those who consistently performed poorly in scenarios also did so in real-life situations. This study exemplified the need for law enforcement policymakers to add some kind of measurement and accountability of scenario-based training, have effective and qualified instructors, and make this type of training a priority. The chapter 2 literature review did not identify areas where scenario-based training was less effective with prior research indicating scenario-based training had more effect on improving decision-making. As many efforts have been made to fix problems after a situation has occurred to manage police reform (Brandl & Stroshine, 2012; Jennings & Rubado, 2017; Ridgeway, 2015; Shjarback et al., 2021) the data in this study and previous studies show that performance issues can be identified ahead of time. With policies that allow agencies to address these deficiencies, poor performance may be identified and efforts made to fix them before a bad shooting occurs.

This study extended the knowledge in this area by identifying areas where training policies, and the proper application of training can influence officer decision-making.

Theme 2: Training Issues

This study identified that decision-making in police shootings can be hindered by bad habits officers develop through training. Participants in the study who had less experience or had less opportunity to do training outside of a range environment described an experience with decision-making that was very limited to habits developed during qualification-focused training. These particular participants all did some kind of action that mimicked an action that was part of their qualification but did not translate to real-world shootings. As previous studies identified (Druckman and Swets, 1988; Hashemi et al., 2019; Kelsey et al., 1999; Malhari et al., 2021) these officers displayed the tendency to perform a familiar task under stress, not necessarily the correct one. Participants also noted that they were somewhat limited in their responses to the threat they faced due to only having limited experiences to draw from. In most cases, the participants who had encountered these issues froze or had delayed responses during their shooting. In several cases, the officers reacted as they would have in the range by shooting upon stimulus rather than truly recognizing a threat and choosing an appropriate response.

The literature review identified elements of stress performance in combat (Druckmen & Swets, 1988; Brodal, 2004; Westman & Eden, 2007; Yerks & Doson, 1908) which indicated humans will only be able to achieve a certain level of performance

under stress based on their level of training. When stress is so overwhelming that one cannot consciously make decisions, they will fall back on what they know and will not be able to perform tasks they have not already performed.

Participants in the study identified unrealistic training as the contributing factor to creating training scars. Not only was qualification-based training identified as an issue, but also scenario-based training that was conducted poorly or had unrealistic elements involved. The participants stated that poor training left them with limited options in dealing with deadly force encounters since they could only perform in a manner that was familiar under stress. The literature review identified many studies dealing with stress and stress inoculation (Brodal, 2004; Malhari et al., 2021; Westman & Eden, 2007; Yerkes & Dodson, 1908) identifying humans have a psychological and physiological response when facing stress. Poor training will lead to officers defaulting to what they know under stress. This default explains why officers have fired their guns at unarmed parties, mistaken weapons for common items, or failed to take other actions which could have put them in a position to make other choices.

This study furthered the knowledge of this area illustrating that conducting a certain type of training alone will not necessarily improve officer decision-making, only improve hands-on skills. There is a need to ensure that the training is done in a manner that it is taken seriously by all stakeholders involved and implemented in a manner which helps improve cognitive performance rather than just attempting to measure skill.

Theme 3: Experience

Studies have identified that experience leads to a greater ability to inoculate one against the effects of stress and leads to better decision-making (Brodal, 2004; Malhari et al., 2021; Westman & Eden, 2007; Yerkes & Dodson, 1908). The results of this study were similar with all 16 participants identifying experience as a major contributing factor to their successful decision-making during shootings. Participants also noted that when they failed to make good decisions, it was due to a lack of experience. Their perceptions of experience were attributed to improvement through actual time on the job and quality training they had taken part in either with their agency or other training in their past careers. With participants for this study coming from different backgrounds and experience levels, all participants who made better decisions with their shootings had been military combat veterans, part of special units in the military or their law enforcement jobs, or had had a significant amount of time on the job before their shooting.

These all exemplified these officers had better decision-making due to increased experience. In this same manner, participants who made poor decisions in their shootings all lacked any significant time on the job or specialized experience or training. While time on the job cannot be controlled, this study did expand the knowledge of how experience can be supplemented with more cognitive-based training to improve decision-making and fill in the gaps for decision-making under stress and provide officers with more confidence in their abilities. These officers exemplified the skills needed to remain at the optimal level of stress based on experience as identified in studies by Westman and Eden (2007). In short, properly and regularly conducted training with a cognitive aspect

that forces the officer to conduct realistic tasks under stress, can supplement experience and create better decision-making in officers.

Theme 4: Fear of Litigation

This study provided insight and expanded the knowledge of officers' perceptions of how fear of violating law or policy had an impact on their decision-making. While past studies have tried to determine if policy and legislative efforts will decrease police shootings (Brandl & Stroshine, 2012; Jennings & Rubado, 2017; Ridgeway, 2015; Shjarback et al., 2021) this study identified that these efforts do have an impact on officer's mindsets and decision-making process. All participants felt their decision-making was impacted negatively to varying degrees by the legislative and policy efforts which have been put in place to decrease police shootings and police use of force. The biggest influence on decision-making participants discussed was the degree of hesitation in taking action these efforts created. The second area discussed by many participants was focusing on how not to violate these policies while still performing their duty, rather than on the threat at hand. The stress these officers displayed based on fear of getting in trouble for their decision created stress based on their ego and the fear of failing (Alzate, 1998) and forced them into a state of decision avoidance (Janis & Mann, 1977). Officers whose agencies did not properly prepare them for the aftermath of a shooting or the implementation of new legislation contributed to officers' decision-making being hindered by fear.

Theme 5: Changes to Training

Quality of training was touched on in other codes by participants, but a pattern of statements differentiated the other themes from statements of the participants focusing directly on particular elements of training which all participants felt needed improvement. In these cases, data pointed to changes that need to be made to already existing training practices and policies. The participants all felt strongly that to improve these areas of training there needs to be more available equipment, or, proper implementation of existing equipment into training, access to realistic locations to conduct training that mimics the real world, the allotment of time to conduct training, and the use of outside instructors or outside tactics to prevent bias perspectives in training. From aspects of the literature review from scenario-based training (Anderson et al., 2016; Fischer et al., 2002; Parker, 2012; Salas et al., 2006; InVeras Training, 2021) to adult learning (Archer, 2012; Blumberg et al., 2019; Bruner et al., 1966; Driskell, et al., 2006; Kusurkar et al., 2013; Lave & Wagner, 1991; Meichenbaum, 1977; Merriam & Bierema 2007; Ryan & Deci, 2000; Skinner, 1954; Wilson, 1993) agencies in the region of study are not doing as much as they should be to improve officers decision-making. While organizational and policy changes can help, there must be support in the forms of funding, open-minded training for officers and policymakers to allow these changes to take place.

As with the implementation of anything in policing, the funding to make the above-mentioned recommendations is something that will take the buy-in from all stakeholders, from city councils and boards of county commissioners who approve budgets, to leaders of agencies who will be the voice to fight for these kinds of funds.

Application of the Conflict Model of Decision-making to the Study

    The Conflict Model of Decision-making (Janis & Mann, 1977) was utilized in this study to understand how training policies affected officer's decision-making under stress focusing on the Vigilance State, where the decision-making comes from cognitive conditioning achieved through experience or effective training (Janis & Mann, 1977). A key factor in Janis and Mann's theory is that every decision has some kind of stress involved and management of this stress leads to better decision-making. For this study, it was imperative to understand what training and experience officers who had been involved in shootings, perceived to improve or hinder good decision-making under stress. The data collected from participants aligned with Janis and Mann's theory and identified that there were several key factors of training that helped create stress inoculation in the form of created experience through training as identified in the previous chapter.

    The data from participants also identified that cognitive conditioning was both positively and negatively influential in decision-making. The training must not merely consist of cognitive type training, but it must be applied in a manner that enhances cognitive abilities through realistic training which creates more experience in officers. It is this experience that provides confidence and quick decision-making under stress defeating the effects of stress on an officer. In relation to the theory for this study and the goal of identifying improvements to training for policymakers, training provided to officers should be structured to improve the real-life skills they need to make better decisions. Training that is poorly organized and poorly executed will create officers who

are more likely to make a poor decisions under the stress of an officer-involved shooting as the training does not inoculate them to the effects of stress in the same manner.

Limitations of the Study

As stated in Chapter 1 the purposeful sampling utilized for this study was specific to this study and its execution. This study was limited to officers who had been in shootings and adjudicated through the court system in the last ten years. While the area of the study has a consistent number of shootings each year amongst the agencies involved, there are only so many officers meeting the criteria to choose from. With the shootings having to be adjudicated, the participant pool would not include officers who were charged or fired as a result of the decision made during their shootings. The lack of some of this information could provide other insight not available to this study. Sampling bias is a concern as all the participants were from a specific geographical region. The training of the officers will be similar but should be consistent with training standards set by the state certification board for the state. It is still important to note that when applied to the nation, there may some minor differences in standardized training which could leave generalization of the application to training policies nationally difficult.

Another limitation of this study was the use of the phenomenological approach due to the researcher's interpretation (Patton, 2002). To reduce bias for this study, notes were taken throughout the data analysis at any time the researcher felt there could be bias inserted, and a comparison was made to the data findings. The use of Atlas. ti 9 coding also helped as the coding was formulated from the statements of the participants. The

findings of this study are entirely based on the statements of the participants' to ensure objective and factual data.

In the data collection phase of this study, participant's experiences and perceptions were often formed in not only what they had experienced in training, but what they observed others do. While the observations did affect their perceptions, there is a biased which exists due to only getting the participant's view on what they observed. There may be other underlying factors that are unknown due to this.

There was a dependence for this study to identify the policy of agencies based on what participants explained. While policies have to meet certain state standards, there is a lot of leeway in the area of this study for agencies to tailor policies to suit their agency needs. The identification and comparison of policies not done for this study may shed further light on the data collected for this study.

This study focused on participants who were successful with their shootings from an aspect of being legally justified and within the policy of their agencies. While it may be more difficult to have willing participants, more data could be relevant to this study dealing with participants who were not successful in their shootings which could further this field of research.

Lastly, the use of Janis and Mann's conflict model of decision-making was utilized in a manner it was not typically used in law enforcement, human, and policy studies. I did find that this theoretical framework was useful in understanding how the elements of Janice and Mann's model, particularly for the hyper-vigilance state discussed in previous chapters, related to stress and stress inoculation through training methods.

Recommendations

Results from this study indicated a major deficiency in the current application of existing, proven training methods and their effectiveness in instilling good decision-making in officers during armed encounters. The major discrepancy is not that training does not exist to activate cognitive functions and create better decision-making in officers, it is that agencies in this study treated these types of training as secondary training and not a priority for agencies. It did not appear to be an intentional goal of agencies, more of a byproduct of agency culture, funding, time and manpower for training, and the focus of training. There were several areas identified by participants which created better decision-making and several areas that participants identified hindered good decision-making. Ultimately, the policies of agencies allowed for a large variance in training with many elements left to interpretation agencies.

The research in this study showed that the number one element which created good decision-making was experience. Experience instills the ability to apply critical thinking and problem skill in officers, especially under stress. Short of time on the job, an element that cannot be controlled, properly executed scenario-based training creates the most experience in officers to allow them to inoculate themselves against the stress and apply quick decisions during officer-involved shootings. At the heart of where participants felt their agencies failed them is the lackadaisical manner in which scenario-based training is typically conducted. No agencies had any policies dictating scenario-based training to be mandatory.

Furthermore, no agency in this study used the performance of officers in scenarios as a measurement for readiness to be deployed. The recommendation in this study for this area is to make scenario-based training a priority for agencies, even over qualifications. Through the literature review and the data collected in this study, officers who made better decisions had much more efficient cognitive functions during their stressful encounters. All of these officers who described better decision-making attributed it to experience, either from time on the job or from effective cognitive-based training.

A second factor associated with scenario-based training is the lack of accountability for poor performance in this type of training participants felt existed. Scenarios either live, through the use of Simunition, or use of simulation machines to simulate stress, create a need to identify a problem, make a decision to deal with the problem, and initiate the decided upon a plan of action. With all participants identifying some kind of example of officers or themselves performing poorly in real-life who performed poorly in training, it is recommended that agencies hold their officers accountable for how they perform in scenarios as they do qualification. This includes the implementation of remedial training, the willingness to keep officers from being deployable, and the willingness to terminate officers who do not improve.

Each agency will have varied adjustments to its existing programs, but with time, manpower, and cost as an issue, the agency leaders and policymakers will need to be involved in this process. As part of this, standards of some kind should be developed and employees made aware. With the increasing difficulty in recruiting officers, the support of the top level of agencies will be needed as the recommendations are contrary to what

agencies do outside of basic academy recruits or in field training for new officers. Under the current methods identified, existing officers are held to a lower standard than new officers. Policies must be put in place and followed to keep bias and interpretation from affecting the training.

The data from this study also recommended that training be less inbred and more advanced. Participants noted that there is typically a training cadre for each agency and little input from others is utilized to develop training. This creates certain training bias and limits what training is available to the average officer as well as creating inconsistent training at times. As legislation and changes to police reform continue to evolve faster than agencies training the training officers receive must adapt with it. Officers are forced to deal with more technology, limitations, and risk of policy violations or violations of law than they ever have been. This means that they must make the same fast decision under stress as always and have even less of a margin of acceptable error. Yet, with this in mind, agencies are continuing with the same type of training which they have done for decades. As police shootings rise, the training level of officers needs to increase as there is just more expected of them than ever before.

Another key area that can either improve or hinder the decision-making of officers this study identified was sharing of information. A major fear for officers was getting in trouble for their decisions because they were unaware of their agency's willingness or ability to support them in the aftermath. Further, they felt like they were not being prepared by their administrations to deal with the quickly evolving police reform efforts and were not sure of their limitations when using force, particularly deadly

force. Furthermore, when officers had issues with use of force, the information was kept secret from other officers in the various agencies and treated like a secret, taking away the opportunity for officers to learn from others' mistakes. Learning from other incidents has a similar ability to activate cognitive learning, much like playing what-if games mentioned by participants.

With the key elements, changes should occur to police training to have an impact on decreasing police shootings. The biggest overall recommendation of this study is the need for police trainers, policymakers, and agency leaders to be willing to step outside what is typically done for police training and focus on the elements which this study that goes against the norms of typical police training. The vast majority of officers who shoot unarmed subjects do so out of fear, stress, and poor decision-making. The future of police training must improve the decision-making of officers through more cognitive training to help create better decision-making in officers and help decrease police shootings. The participant's experiences showed agencies are not always stringent enough in the enforcement of policy and do not often due what is needed unless it is spelled out in the policy. It is recommended that not only do agencies make the mentioned changes, but put them in writing, as part of their policy to ensure the likelihood of these policies being followed and changes implemented.

Not only do agencies need to take more stringent manners in their policy and application of policy, but entities that oversee and set the rules for police certifications must also have more stringent and specific guidelines. You cannot solely blame agencies

for falling into the trap of applying inadequate training policies when there is no oversight of the way agencies train in certain areas.

Due to the limitations of this study, how attempt to implement training changes will be dependent on the particular agency's policies, support from city or county entities, and support from the citizens these agencies serve. Ultimately, police reform has set the bar for the level of police performance much higher than it has ever been. Based on the data collected in this study, training policies on all levels, particularly in the area of use of force needs to be changed to meet these new levels of expectations as it is inadequate in their current application.

<div align="center">**Implications**</div>

Research can be a catalyst for social change providing more reliable information as a tool for others to use to promote changes that will better the individual and society. The implications for positive social change from the research in this study stem from the identification of what elements of police training create better decision-making in officers when determining to deploy their firearms. The promotion of more efficient training focused on developing better decision-making can make an impact on decreasing the number of officer shootings in ways legislative and policy-related efforts have failed in the past. From an individual level, this study may assist officers in expanding their understanding of what can improve their skill level, and decision- making ability to help them make good decisions and improve their chances of surviving a deadly force encounter.

From the organizational level this study can provide information for trainers and policymakers to bolster their arguments for changes to training policy, acquiring more funds and time for training. While this process may take time and the ultimate approval of those in charge of policies and funds, police trainers can start the process themselves. By tailoring training to the varying skill levels of officers, redeveloping training to focus on identified problem areas, and changing their attitudes towards the priorities of training, changes can be set in motion which will complement more difficult to achieve changes as they are accomplished. On a societal level, the data from this study and its potential to decrease police shootings can help attribute to a better partnership between the community and the law enforcement entities that serve them.

Conclusion

Police shootings are always stressful for officers and communities. Modern police reform efforts are now compounded due to a rapidly changing standard of what is an acceptable use of force. There is no way to eliminate all police shootings, as suspects always influence outcomes of incidents that are outside of officers' control. What can be decreased is shootings where officers make poor decisions, either leading up to or during encounters. Allowing officers to have the tools and training needed to make good decisions under stress in all use of force situations will help in terms of decreasing police shootings through the implementation of proper training policies. Recommendations involve identifying a shift in focus and culture for police agencies to train officers to think rather than just unconsciously react.

References

Abrams, Z. (2020). What works to reduce police brutality. *American Psychological Association*, *51*(7), 30.

Akbas, A., Marszałek W., Kamieniarz A., Polechoński J., Słomka KJ., Juras G. (2019). Application of virtual reality in competitive athletes - a review. *Journal of Human Kinetic*s. 69, 5-16. https://doi.gov10.2478/hukin-2019-0023

Alzate, R. (1998). Analysis and resolution of conflict. A psychological perspective service. [Editorial]. *Paiz Vasco University Review*.

Anderson, C., Ihori, N., Bushman, B., Rothstein, H., Shibuya, A., Swing, E., Sakamoto, A., & Saleem, M. (2010). Violent video game effects on aggression, empathy, and Prosocial behavior in eastern and western countries: A meta-analytic review. *Psychological Bulletin*, *136*(2), 151-173.

Andersen, J. P., & Gustafsberg, H. (2016). A training method to improve police use of force decision-making: A randomized controlled trial. *Sage Open*. https://doi.org/10.1177/2158244016638708

Andersen, J.P., Pitel, M., Weerasinghe, A., & Papazoglou, K. (2016). Highly realistic scenario-based training simulates the psychophysiology of real-world use of force encounters: Implications for improved police officer performance. *Journal of Law Enforcement*, *5*(4), 1-13.

Andonova, E. (2016). Cycle of misconduct: How Chicago has repeatedly failed to police its police. *DePaul Journal for Social Justice*, *10*(2).

Archer, M. S. (2012). *The reflexive imperative in late modernity*. Cambridge University Press.

Augustine, R. (2020). *Force-on-force scenario-based training and the relationship to police officer force options*. (Publication No. 28150009) [Doctoral dissertation, North Central University]. ProQuest Dissertations and Theses.

Austin, E. K., & Callen, J. C. (2018). Social justice and qualitative praxis. *Public Administration Quarterly*, *42*(2), 252–284.

Awashti, S., & Prabhakar, P. (2019). A comparative study of decision-making styles of trainee coaches and coaches with experience. *International Journal of Physiology, Nutrition and Physical Education, 29*(11), 34-37.

Beasely, J. (2020). *Perceptions of law enforcement officer's quality of training in use of force*. (Publication No. 28027704) [Doctoral dissertation, North Central University]. ProQuest Dissertations and Theses.

Blickensderfer, E., Strally, S., & Doherty, S. (2012). The effects of scenario-based training on pilots' use of an emergency whole-plane parachute. *International Journal of Aviation Psychology,* 22(2), 184-202. https://doi.org/10.1080/10508414.2012.663253

Blumberg, D. M., Schlosser, M. D., Papazoglou, K., Creighton, S., & Kaye, C. C. (2019). New directions in police academy training: A call to action. *International Journal of Environmental Research and Public Health*, *16*(24), 4941. https://doi.org/10.3390/ijerph16244941

Braga, A., Coldren, J. R., Sousa, W., Rodriguez, D., & Alper, O. (2017). The benefits of body-worn cameras: New findings from a randomized controlled trial at the las vegas metropolitan police. *Crime and Criminology,* 108(3), 511.

Brandl, S., & Stroshine, M. (2012). The role of officer attributes, job characteristics, and arrest activity in explaining police use-of-force. *Criminal Justice Policy Review*, *24*(5), 551-572.

Brewster, J., Stoloff, M. L., Corey, D. M., Greene, L. W., Gupton, H. M., & Roland, J. E. (2016). Education and training guidelines for the specialty of police and public safety psychology. *Training and Education in Professional Psychology*, *10*(3), 171-178. https://doi:10.1037/tep0000122

Brodal, P. (2004). *The central nervous system: Structure and function* (3rd ed.). Oxford University Press.

Bruner, J, Olver, R., & Greenfield, P. (1966). Studies in cognitive growth. *Journal of Philosophy*, *65*(6), 117-119. https://doi.org/10.2307/2024205

Burnett P., Mann., L., & Beswick, G. (2007). Validation of the flinders decision-making questionnaire on course decision-making by students. *Australian Psychologist,* *24*(2), 207-217. https://doi.org/10.1080/00050068908259567

Chapman, B. (2019). Body worn cameras. What the evidence tells us. https://nij.ojp.gov/topics/articles/body-worn-cameras-what-evidence-tells-us

Clark, R., Mayer, R. (2009). *Accelerating expertise with scenario-based e-learning*. Pfeiffer.

Colorado POST. (2021). General information. HTTPs://www.coloradopost.gov/

Colorado Radio Staff. (2021). 2021 colorado police shootings. Associated press,

https://www.cpr.org/2021/01/19/2021-colorado-police-shootings/

Colorado Revised Statues. (2020). Title 18-Criminal Code (2021 Edition).

Cox, W. T. L., Devine, P. G., Plant, E. A., & Schwartz, L. L. (2014). Toward a

comprehensive understanding of officers' shooting decisions: No simple answers

to this complex problem. *Basic and Applied Social Psychology*, *36*(4), 356–364.

https://doi.org/10.1080/01973533.2014.923312.

Creswell. J. W. (2007). *Qualitative inquiry & research design: Choosing among five*

approaches. Sage Publications.

Denzin, N. K., Lincoln, Y. (2003). *The landscape of qualitative research: Theories and*

*issues (7th ed.).*Sage Publications.

Driskell, J. E., Salas, E., & Johnston, J. H. (2006). Decision-making and performance

under stress. *Military life: The psychology of serving in peace and combat:*

Military performance (pp. 128–154). Praeger Security International.

Druckman, D., Swets, J. (1988). *Enhancing human performance: Issues, theories, and*

techniques. The National Academic Press.

Engel, R., McManus, H., Isaza, G. (2020). Moving beyond best practice: Police reform

and a call for evidence to reduce officer-involved shootings. *The Annals of the*

American Academy of Political and Social Science.687,

(1).https://doi.org/10.1177/0002716219889328

Federail Bureau of Investigation. (2020). National use-of-force data collection.

https://www.fbi.gov/services/cjis/ucr/use-of-force

Fisher, D., Laurie, N., Glaser, R., Connerney, K., Pollatsek, A., Duffy, S., Brock, J. (2002). Use of a fixed-base driving simulator to evaluate the effects of experience and PC-based risk awareness training on drivers' decisions. *Human Factors*, *44*, 287-302.

Grossman, B., & Christensen, L. (2008). *On combat: The psychology and physiology of deadly conflict in war and in peace* (3rd ed.). Warrior Science Publications.

Guba, E. G., & Lincoln, Y. S. (1989). Fourth generation evaluation. Sage Publications, Inc.

Hamilton, M. (2017). Excessive lethal force. Northwestern University Law Review, 111(4), 1167–.

Hashemi, M., Gladwin, T., Valk, N. M. de, Zhang, W., Kaldewaij, R., Ast, V. A. van, Koch, S. B., Klumpers, F., & Roelofs, K. (2019). Neural dynamics of shooting decisions and the switch from freeze to fight. *Scientific Reports*, *9*(1), 4240–4240. https://doi.org/10.1038/s41598-019-40917-8

Haskins, P. (2019). Conducted energy devices: Policies on use evolve to reflect research and field deployment experience.https://nij.ojp.gov/topics/articles/conducted-energy-devices-policies-use-evolve-reflect-research-and-field-deployment.

H.B. Rep. No. 1309.01 (2020). https://leg.colorado.gov/sites/default/files/documents/2020A/bills/2020a_217_01.pdf

InVeras Training. (2021). *History of fats*. Retrieved from

https://www.inveristraining.com/

Janis, I., Mann, L. (1977*). Decision-making: a psychological analysis of conflict, choice,*

and commitment. Free Press.

Janis, I., Mann, L. (1977) Emergency decision-making: A theoretical analysis of

responses to disaster warnings, *Journal of Human Stress*, *3*(2), 35-48.

https://doi: 10.1080/0097840X.1977.9936085

Jenkins, B., Semple, T., Bennell C., An evidence-based approach to critical incident

scenario development. *Policing: An International Journal, 44*(3). 437-454.

https://doi.org/10.1108/PIJPSM-02-2020-0017

Jennings, J.T., Rubado, M.E. (2017). Preventing the use of deadly force: The relationship

between police agencies and the of officer-involved gun deaths. *Public*

Administration Review, *77*(2), 217–226.

Junger, P. (2018). *The effects of hypervigilance on decision-making during critical*

incidents. [Master Thesis, Naval Post Graduate School].

https://apps.dtic.mil/sti/citations/AD1065390

Kappeler, V. (2006). *Critical issues in police civil liability.* Waveland Press Inc.

Kelsey, R., Blascovich, J., Tomaka, J., Leitten, C., Schneider, T.R., Wiens, S. (1999).

Cardiovascular reactivity and adaptation to recurrent psychological stress: Effects

of prior task exposure. *Psychophysiology*, *36*(6), 818–31.

Kusurkar, R., Ten Cate, T., Vos, C., Westers, P., Croiset, G. (2013). How motivation

affects academic performance: a structural equation modeling analysis. *Advances*

in health sciences education: theory and practice, *18*(1), 57–69.

https://doi.org/10.1007/s10459-012-9354-3

Lave, J., &Wagner, E. (1991). *Situated learning; legitimate peripheral participation.* Cambridge University Press.

Malhari, A., Bhattacharyya, D., Chatterjee, T., Mani, K.V., Pal, M. (2021). Effect of combat vehicle operation on cognitive workload and performance. *Defence Life Science Journal*. *6(*2), 177-186), https://doi: 10.14429/dlsj.6.16818

Mangels, L., Suss, J., Lande, B. (2020). Police expertise and use of force: Using a mixed-methods approach to model expert and novice use-of-force decision-making. *Journal of Police and Criminal Psychology*, 35 (6).DOI:10.1007/s11896-020-09364-4

Mays, L., Taggart, W. (2018). Deadly force as a policy problem in law enforcement: Do administrative practices make a difference? *Policy*. *85*(5), 309-318.

Maxwell, J. A. (2013). *Qualitative research design: An interactive approach (3rd ed.).*Sage Publications Inc.

Meichenbaum D. (1977). *Stress-inoculation training. In: Cognitive-behavior modification. The springer behavior therapy series. Springer*. https://doi.org/10.1007/978-1-4757-9739-86

Merriam, S., Bierema, L. (2007). *Adult learning: Linking theory and practice*. Jossey-Bass.

Morrison, G.,Vila, B. (1998). Police handgun qualification: practical measure or aimless activity? *Policing: An International Journal*. 21(3), 510-533. https://doi.org/10.1108/13639519810228804

Murray K.R., & Haberfeld M.R. (2021). *Rules of engagement: Addressing the "unconsciously incompetent" mode through scenario-based training. In: Use of force training in law enforcement. Springer briefs in criminology*, Springer. https://doi.org/10.1007/978-3-030-59880-8_4

National Institute of Justice. (2009). The use-of-force continuum. office of justice programs. Retrieved from: http://www.nij.gov/topics/law-enforcement/officersafety/use-of- force/pages/continuum.aspx

National Institute of Justice. (2020). Overview of police use of force. https://nij.ojp.gov/topics/articles/overview-police-use-force.

Obasogie, O. K., Newman, Z. (2019). The endogenous fourth amendment; An empirical assessment of how police understandings od excessive force become constitutional law. AW. *Cornell Law Review*, 104(5), 1281.

O'Connor, K., Glenberg, A. (2006). Situated cognition. *Encyclopedia of Cognitive Science*, *1*(15). https://doi: 10.1002/0470018860

Patton, M. (2002). *Qualitative research and evaluation methods*. Sage Publications.

Peters, J.G., Brave, M. (2007). Force continuums: Are they still needed? [Editorial] *Police and Security News*, *22*(1), 1-5.

Phillips, N. (2020, June, 6). Say their names: A look at controversial police killings in

Colorado. The Denver Post. Retrieved from

https://www.denverpost.com/2020/06/06/controversial-police-deaths-in-colorado/

Plakas v. Drinski 19 F.3d 1143 7th Cir. 1994 .https://casetext.com/case/plakas-v-

drinskihttps://casetext.com/case/plakas-v-drinski.

Police Executive Research Forum. (2018). Critical response tool kit: Part 3.

https://www.policeforum.org/post-critical-incident

Poos, J. M., van den Bosch, K., & Janssen, C. P. (2017). Battling bias: Effects of training

and training context. *Computers & Education*, 111, 101-113. doi:

10.1016/j.compedu.2017.04.004

Ravitch, S. M., Carl, N. M. (2016). *Qualitative research: bridging the conceptual,*

theoretical, and methodological. Sage Publications.

Rehnquist, W. H. & Supreme Court of The United States. (1988). U.S. Reports: Graham

v. Connor et al., 490 U.S. 386

Rehnquist, W. H. & Supreme Court of The United States. (1989). U.S. Reports: Canton,

Ohio v. Harris et al., 489 U.S. 378

Ridgeway, G. (2015). Risk factors associated with police shootings: A matched case-

control study. *Statistics and Public Policy, 3*(1), 1-6.

https://doi:10.1080/2330443X.2015.1129918

Rule, J. A. (2013). A symbiotic relationship: The ooda loop, intuition, and strategic

thought. [Maters monograph, United States Army War College].

https://apps.dtic.mil/sti/pdfs/ADA590672.pdf

Ryan, R. M., Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist, 55*(1), 68–78. https://doi.org/10.1037/0003-066X.55.1.68

Salas, E., Priest, H. A., Wilson, K. A., Burke, C. S. (2006). *Scenario-based training: The psychology of serving in peace and combat: Operational stress.* Praeger Security International.

Saldana, J. (2016). The coding manual for qualitative researchers (3rd ed.). Sage Publications.

Schwartz, I. (2016). Dallas police chief david brown: we're asking cops to do too much in this country. [Editorial]. *Real Clear Politics*.https://www.realclearpolitics.com/video/2016/07/11/dallas_police_chief_david_brown_were_asking_cops_to_do_too_much_in_this_country.html

Sherman, L. W. (2020). Evidence-based policing and fatal police shootings. Promise, problems and prospects. *Annals of the American Academy of Political and Social Science*, 687, p. 8-26.

Shjarback, J. A., White, M. D., Bishopp, S. A. (2021). Can police shootings be reduced by requiring officers to document when they point firearms at citizens? *Injury prevention: Journal of the International Society for Child and Adolescent Injury Prevention, 1*(21). https://doi:10.1136/injuryprev-2020-043932

Silverstein, M. (2011). American civil liberties union of Colorado; Summary letter. https://www.aclu.org/sites/default/files/field_document/co_doj.pdf

Simmons, K. (2011). Cooperative Federalism and Police Reform: Using Congressional Spending Power to Promote Police Accountability. *Alabama Law Review*, 62(2).

Skinner, B. F. (1954). The science of learning and the art of teaching. *Harvard Educational Review, 24,* 86–97.

Smith, J., Flowers, P., Larkin, M. (2009). *Interpretative phenomenological analysis: Theory, method and research*. Sage Publications.

Smith, J.A., Osborn, M. (1999). *Doing interpretative phenomenological analysis: Theories and methods.* Sage Publications.

Stake, R. (2010). *Qualitative research: Studying how things work.* Guilford Press.

Stringer, G. (2010). *The failure of police firearms training for the real world. Criminal Justice Institute* [Unpublished college paper]. Criminal Justice Institute, School of Law Enforcement Supervision.

Sawatsky, N. (2019). Understanding the impact of emotional stress on crisis decision-making.[Doctoral dissertation, King's College London].Enthesis, https://kclpure.kcl.ac.uk/portal/files/122130863/2020_Sawatzky_Noel_1668743_ethesis.pdf.

Summers, D. (2021, May, 18). Co Ranks high in deadly police shootings. Washington Post.https://kdvr.com/news/colorado-has-some-of-nations-highest-police-shooting-numbers/

Thomasson, J. (2013). *An analysis of firearms training performance among active law enforcement officers*. [Doctoral dissertation, University of Arkansas]. Scholar works, http

Thompson v. Hubbard 257 F.3d 896, 899 (8th Cir., 2007).

https://caselaw.findlaw.com/us-8th-circuit/1215327.html

Trochim, W.M., Donnelly, J.P. (2006). *The research methods knowledge base* (3rd ed.).

Atomic Dog.

US Census. (2019). *Quick facts: Adams county colorado*. Census.gov.

https://www.census.gov/quickfacts/adamscountycolorado

Van, M. M. (1990). Researching lived experience: Human science for an action sensitive

pedagogy. Albany, N.Y.: State University of New York Press.

Verhage, A., Noppe, J., Feys, Y., Ledegen, E. (2018). Force, stress, and decision-making

within the belgian police: The impact of stressful situations on police decision-

making. *Journal of Police and Criminal Psychology*, 33(4), 345–357.

https://doi.org/10.1007/s11896-018-9262-4

Walden University (2015/2016). *Social change.* Retrieved from https://Walden

university.edu/about/social-change

Walker, S., Alpert, G., Kenney, D. (2001, July). Early warning systems: Responding to

the problem officer (Research Brief). National Institute of Justice.

https://www.ojp.gov/pdffiles1/nij/188565.pdf

Watson, P. (1978). *War on the mind: The military uses and abuses of psychology.* Basic

Books, Inc.

Westman, M, Eden, D. (2007). The inverted-U relationship between stress and

performance: A field study. An International Journal of Work, Health &

Organizations. 10(2), 165-173. https://doi.org/10.1080/02678379608256795.

White, B. R. & Supreme Court of The United States. (1984). *U.S. Reports: Tennessee v. Garner, 471 U.S. 1.*

White, V., Wearing, A., Hill, D. (1994). Is the conflict model of decision-making applicable to the decision to be screened for cervical cancer? A field study. *Journal of Behavioral Decision-making*, 7(1).doi.org/10.1002/bdm.3960070105

Wilson, A. (1993). The Promise of situated cognition. *New Direction for Adult & Continuing Education*, 57.

Worrall, J. L., Bishopp, S. A., Zinser, S. C., Wheeler, A. P., Phillips, S. W. (2018). Exploring bias in police shooting decisions with real shoot/don't shoot cases. *Crime and Delinquency*, *64*(9), 1171–1192. https://doi.org/10.1177/0011128718756038

Yerkes, R.M., Dodson, J.D. (1908). The Relation of Strength of Stimulus to rapidity of habit formation. *Journal of Comparative Neurology & Psychology, 18, 459– 482*. https://doi.org/10.1002/cne.920180503

Zimring, F. (2020). Police killings as a problem of goverance. *The Annals of the American Academy of Political and Social Science*, 687(1). 114-123 .https://doi.org/10.1177/0002716219888627.

Appendix A: Participant Invitation Letter/Email

Dear Invitee,

My name is Alexander Kondos. I am a doctoral student at Walden University's Public Policy and Administration Program. I am kindly requesting your participation in a doctoral research study that I am conducting titled:

Understanding Police Decision-making with Firearms: From Training to Real-life Deployment.

The study involves a brief demographic survey and participation in an audio recorded 30-minute interview. I am looking for 15 to 20 participants to complete this study.

The intention is to assess elements of firearms training and how they affected the decision-making process of officers who have been involved in on-duty shootings. Your participation in this study will be of great importance to further development of improved firearms training policies for law enforcement agencies.

If you would like to participate in the study please read the Informed Consent letter below and respond back to this email with an affirmative answer you would like to participate.

Thank you for your time and participation

 Sincerely,

Alexander Kondos, Doctoral Student, Walden University

Appendix B: Semi-Structured Interview Guide

Interview Questions

1. Tell me about your background in law enforcement? (years on the job, types of work done, etc.)

2. What does firearms training consist of in your agency?

3. What other kinds of training in relation to use of force have you been through?

4. What does training in your agency do to incorporate decision-making under stress?

5. How have the training experiences you have been through influenced your decision-making?
***The next few questions will involve you thinking about the circumstances of a specific shooting you were involved in. If you have been involved in more than one officer-involved shooting, please focus on the facts of one incident.**

6. What were the circumstances (vague as possible to protect identity) surrounding your officer-involved shooting?

7. What elements of your training (such as marksmanship, shooting and moving, scenario, decision-making, weapon manipulation, etc.) help you make good decisions during your shooting?

8. Were there elements of your training which hindered your decision-making during your shooting?

9. Are the training policies in your agency effective in instilling good decision-making from the aspects of deploying your firearm?

10. What changes to your agencies training policies would help create better decision-making for you or officers in your agency?
11. Does poor decision-making displayed in training keep officers from being deployable in your agency?
12. When officers in your agency are involved in a shooting, is there any feedback or training taken back to the rest of the agency or any training developed based on the shooting?
13. Is there anything you would like to clarify or anything you feel which was not discussed which would be beneficial to this study?

Appendix C: Demographic Questionnaire

Participant number:_____

Please answer the following:

1. **Age** _____

2. **Race**_____

3. **Years of service at time of shooting**_____

4. **Rank at time of shooting**_____

5. **Sex**_____