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EXPLORING POLICE ACTIVE SHOOTER PREPAREDNESS IN MICHIGAN: A GROUNDED STUDY OF POLICE PREPAREDNESS TO ACTIVE SHOOTER INCIDENTS, DEVELOPING A NORMATIVE MODEL

by

Daryl Darwin Green

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in partial fulfillment of the requirements
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EXPLORING POLICE ACTIVE SHOOTER PREPAREDNESS IN MICHIGAN: A GROUNDED STUDY OF POLICE PREPAREDNESS TO ACTIVE SHOOTER INCIDENTS, DEVELOPING A NORMATIVE MODEL

Daryl Darwin Green, Ph.D.

Western Michigan University, 2013

On September 22, 2013, at a memorial for people killed in a September 16, 2013 active shooter incident, President Barack Obama stated that the United States "can't accept" the killing of 12 people at Washington's Navy Yard as "inevitable" and that the shooting should "lead to some sort of transformation" (Merica, 2013). Active shooter incidents remain a constant societal concern that are deserving of continued academic research. The following grounded theory study examined the active shooter incident preparedness systems of police agencies in three Michigan counties. The principal investigator observed the strategic and tactical objectives of police agencies relative to active shooter preparedness systems, including police collaborations, tactics, training, technology, and written documentation.

The project analyzed the consistency of police agency strategic and tactical objectives in comparison with interviews, written documentation, and observations of scenario-based active shooter incident training. An exploratory model was chosen primarily because of the inadequate levels of empirical research and the need to produce a normative understanding of police active shooter incident preparedness. The study's methodology used an analysis of interviews, police training, and written documentation

relating to technology, equipment, mutual aid agreements, and memorandums of understanding, policies, and procedures. The study found that police active shooter incident preparedness is based on police-centric perspectives that engage limited levels of collaboration, strategic objectives, written documentation, threat assessment protocols, and related citizen training. The study created a prescriptive model for police active shooter preparedness termed the *holistic model*. This research project will assist public administrators with leading comprehensive guidelines to increase police active shooter incident preparedness and collaborations.

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The writing of this dissertation was a challenging and wonderfully transformative experience. The dissertation was an undertaking that I could not have completed without the assistance of a number of people in my life that persisted in their encouragement.

First and foremost, thanks to my wife, Malinda Green, for enduring inspiration and gentle patience throughout this process. Without your spirit this project would have remained an idea only. To my son, Jaden Green, thank you so much for the motivation to accomplish this dream. It has always been my goal to be a role model to you, and this dissertation is a testament to the concept of perseverance. Thank you to my parents John and Stephanie Green, for a lifetime of support and always keeping me focused on what truly matters.

Thanks to Dr. James Visser and your genuine willingness to assist me on this study. Your advice and knowledge were reassuring throughout this process. Thank you as well to Dr. Daryl Delabbio and Dr. Barry Goetz; your time and professionalism were truly appreciated.

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To all of my brothers and sisters in policing, it is with sincere gratitude that I thank you all for your continued struggle to protect our communities. Finally, I thank all

of the first responders and members of the U.S. military; I hope you gain a hint of value from this project. It is with profound respect that I appreciate the personal sacrifices you all make to protect our great Country.

Daryl Darwin Green

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CHAPTER I

INTRODUCTION

The notion of an active shooter engaged in the pursuit of killing citizens is alarming, but nonetheless a viable concern faced by the modern institution of policing. The Department of Homeland Security (2012) articulates that an active shooter incident is one in which "an individual actively engages in killing or attempting to kill people in a confined and populated area and in most cases, active shooters use firearms(s) and there is no pattern or method to their selection of victims." The Newtown, Connecticut, school shooting observed the deaths of 20 children and six adults, while the Aurora, Colorado, mass shooting, classified as the largest mass shooting ever in U.S. history, demonstrated 58 persons injured and 12 dead serve as reminders that active shooter incidents are pervasive (Brennan, 2012). As result, there should be a continued demand for systems that minimize the casualties of such incidents and seek to empower the preparedness of first responders.

The question of leading practices for police active shooter preparedness continues to evolve since active shooter incidents at Columbine High School and Virginia Tech University (Fassinger, 2011; Heinen, Webb-Dempsey, Moore, McClellan, & Friebel, 2007; Pignatelli, 2010). After actions reports from shootings at Virginia Tech University (Massengill, 2007) and Columbine High School (State of Colorado, 2000) provide that the police response is a primary element regarding injury and death mitigation. Injuries and deaths resulting from active shooter incidents can be quantified in a host of costs,

including insurance premiums, workers' compensation, medical payments, legal expenses, psychological traumas, business losses, and overall sense of public safety. It is from this perspective that assessment of active preparedness systems requires review.

The Columbine High School active shooter incident of 1999 left 14 dead and 23 others injured, finding that the former recognized active shooter response tactic of establishing a perimeter around the threat area and waiting for a Special Weapons and Tactics (SWAT) team to arrive was not a formidable leading practice. The stimulus for a reported over-reliance on the SWAT response to active shooter incidents is bent on the notion that most active shooter incidents have the short duration of approximately "10-to-15 minutes" (Department of Homeland Security, 2012). The dominant police response to an active shooter incident since Columbine had been that of a quad response, which involves a minimum of four officers entering the threat area with the intent to neutralize the shooter(s) (Dino, 2009). However, the present leading tactical response argues that police officers should be trained in a manner that is not dependent on a specific number of officers entering the active shooter threat area. Current accepted leading practices for active shooter responses promotes responses that are immediate at stopping the threat and frowns on the notion of waiting for a SWAT response.

While the police response to an active shooter incident has predominantly changed since Columbine, it is argued that related gun control legislation has waned. Brennan (2012) articulates that after three decades of mass shootings there has only been limited legislative changes enacted, which much have largely been undone by Second Amendment court challenges. The Newtown, Connecticut, shooting of 2012 and the Washington Navy Yard shooting of 2013 are the current stimulated focus for gun control

legislation challenges. As a result, President Obama requested the following Congressional changes: reinstatement of the ban on "assault weapons," which lapsed in 2004; elimination of ammunition magazines that hold over 10 rounds; and the notion of universal background checks for gun sales (Feith, 2013). Yet, there remains the looming issue of how police respond, train, and collaborate with other police agencies regarding their responses to active shooter incidents.

Since the inception of modern policing, the founder of the Metropolitan Police Force of London argued that the police and the community are vested in the goal to protect society (Lentz and Chaires, 2007). Therefore, as a society, we must engage police active shooter preparedness systems that mitigate the injury and death of citizens and first responders. This research focused on the active shooter preparedness of police agencies in three Michigan counties, which included a sample of 20 police agencies.

A grounded theory study was utilized to analyze the issue of police preparedness. Moreover, Fassinger (2011) used grounded theory to analyze police response to active shooter incidents in New York state learning environments, recommending that similar studies be conducted in other geographical areas. The following study sought to gain understanding relative to how police agencies in three Michigan counties prepare for responses to active shooter incidents through their strategies, tactics, equipment, technology, collaborations, and policies.

The police engagement of an active shooter incident is primarily a lethal contact that complicates the implementation of police training, tactics, equipment, technology, and overall response protocols. Arguably, if these incidents are not effectively handled, then the probabilities of civil liability, injury, and death are exacerbated. Police agencies

should engage active shooter preparedness models that are effective at injury and death mitigation. Furthermore, it is common for polices agencies to request mutual aid during responses to active shooter incidents, and therefore tactics, training, equipment, technology and responses should arguably be consistent with bordering jurisdictions (Virginia Tech Review Panel, 2007). It is this question of consistency in preparedness standards that motivates this investigator to understand the nuances of how police agencies actually engage systems of active shooter preparedness.

Exploration of active shooter preparedness is bent on the understanding of proactive and reactive systems, which are intent on saving lives and reducing injuries. Since the modern formulation of American policing in the 1840s, police agencies have reactively deployed resources to emergency situations that require immediate attention and intervention (Schafer, Buerger, & Myers, 2011). Active shooter incidents require immediate responses, which must consist of protocols that are based on leading practices. Since 9/11, police agency response concerns have increased to include homeland security preparedness (Oliver, 2006). Even in the wake of the 2012 Aurora, Colorado, active shooter massacre, some police agencies are still scrambling to prepare for active shooter incidents. However, some police agencies have heightened active shooter preparedness systems, which deserve attention in order for other police agencies with weaker systems of preparedness to evaluate as leading practices.

Problem Statement

The reasoning for effective police active shooter preparedness is bounded in the concept of risk management and societal protection. Although police agencies do engage

in some proactive police measures, they have largely remained a reactionary institution (Kennedy & Van Bruschot, 2009). Concern for a proper police preparedness to active shooter incidents is historically based on the analysis of previous such incidents including but not limited to Columbine High School, Virginia Tech University, University of Texas at Austin, Northern Illinois University, Louisiana Technical College, Utoya Island and the Oslo shootings (New York City Police Department, 2012). Each of the above incidents provides rich data to create a better state of police active shooter preparedness. In addition, the following qualitative case study strived to analyze what methods of training, policies, collaborations, and other related systems that police agencies in three Michigan counties have implemented regarding their active shooter preparedness. The study may be particularly important to researchers and public administrators interested in the development of leading practices that reduce death, injuries, and property damage.

Within the realm of active shooter preparedness there is the question of whether local and county jurisdictions have the necessary systems in place to effectively respond and prevent active shooter incidents. Additionally, there is limited information to predict when such an incident will occur, which complicates the matter of preparedness. Marcou described the five phases of an active shooter: (1) fantasy of the proposed event, (2) planning, (3) preparation, (4) approach (commitment to the incident), and (5) implementation of the attack (Garrett, 2007). Meloy and O'Toole (2011) argued the concept of leakage where communication to a third party of a planned mass murder is found in the majority of mass cases of attack. O'Toole (2000) examined school shootings finding that "a student intentionally or unintentionally reveals clues to feelings, thoughts, fantasies, attitudes, or intentions that may signal an impending violent act" (p.

14). Ideally, police agencies should seek to develop preparedness systems to intervene before the violent approach and implementation of a mass attack. However, there is limited literature demonstrating if police agencies are proactively engaging threat assessment protocols. The issue of how proactive police agencies are concerning prevention of active shooter incidents was a concern addressed in this study. In essence, are there systems in place to effectively intervene before an active shooting incident begins its systematic pattern of killing?

Giduck (2005) argued that most police jurisdictions are understaffed which hinders their ability to respond to critical incidents. When examining local government terrorism preparedness, Clovis (2008) articulated that the capacities of smaller jurisdictions necessitate the need to formulate collaborative networks. Active shooter responses are time-sensitive events that demand expedited police responses. Often there is a need to collaborate with other police agencies, which requires common tactics and communication systems (Frazzano, 2010). There is demand in policing to effectively manage resources, which argues for the need to form collaborative systems, especially in the time of critical incidents.

Society may argue that is the responsibility of public administrators to construct and maintain levels of active shooter preparedness that lessen injury and death. Law enforcement agencies nationwide have a duty to properly engage the matter of active shooter preparedness. In addition, Gulen (2010) argued that police executives and other administrators must continue to develop and implement innovative, dynamic, and evolving active shooter response tactics. Active shooter incidents by their very nature challenge police protocols relative to training, equipment and technology, response,

prevention, and collaborations. According to Pignatelli (2010) and Fassinger (2011), the key issue of active shooter preparedness is the police response, which is related to police protocols, policies, and training.

School shootings at Columbine High School in 1999 and Virginia Tech University in 2007 were tragic; however, both shootings serve as data for the creation of leading practices concerning police active shooter preparedness. Prior to the assessments of the Columbine High School shooting, it was considered best practice for non-tactically trained police officers not to enter a building during an active shooting incident but to instead construct containment of the crisis area through cordoning, maintaining communications if prompted by the accused, and, finally, contacting a tactical team to engage the threat (Governor's Columbine Review Commission Report, 2001). The Columbine High School incident produced a tactical distinction of how police agencies should handle barricade and hostage situations versus active shooter incidents. Borelli (2005) found that the first arriving officers at the Columbine High School shooting behaved consistent to their training when they waited outside of the school 46 minutes for the SWAT team. The pre-Columbine tactic that had non-tactically trained police officers standing by during an active shooter incident is no longer considered a leading practice (Dino, 2009; Fassinger, 2011; Pignatelli, 2010). As a result, the current policing standard is for active shooter trained officers to immediately challenge the perpetrator(s) in order to neutralize the threat (Heinen et al., 2007).

The International Association of Campus Law Enforcement Administrators (IACLEA) examined the Virginia Tech University campus shooting of 2007 and concluded with 20 recommendations for responding to active shooter incidents. Many of

the IACLEA recommendations include addressing threat and vulnerability assessments, emergency responder communication interoperability issues, establishing multi-ports of communication systems for students and faculty, increased police training for public safety officers, and strengthening communications with federal, state, and local emergency responders (IACLEA Special Review Task Force, 2009).

The Governor's Columbine Review Commission Report (2001) found a need for law enforcement to create a standardized active shooter response. The notion of a failed standardized response complicates the ability for police departments to engage in effective multi-agency responses. SyWassink (2002) argued that law enforcement's response to active shooter violence is based on multiple agency cooperation and planning, which presents a strong argument for the examination of how police agencies collaborate with surrounding jurisdictions. Moreover, the Virginia Tech Review Panel Addendum (2009) analyzed the 2007 Virginia Tech University shootings, finding that bordering police agencies should train together to promote effective responses to active shooter incidents.

There is a distinct gap in active shooter empirical literature, which undermines the ability of public administrators to prescribe to a best practice approach. Citing a paucity of empirical literature, Fassinger (2011) found that there is limited police consensus concerning mandatory active shooter training, let alone standardization of responses. Dino (2009) noted that many police executives are resistant to active shooter training because of budgetary issues or a belief that SWAT teams remain more properly suited to handle such incidents. The Columbine High School shooting articulated that the slower and methodical response of a SWAT team delays the police active shooter response and

further contributes to increased injuries and deaths (Governor's Columbine Review Commission Report, 2001). Police response time to an active shooter incident is a major concern in that once a shooting of this nature commences, a person is shot every 15 seconds (Wood, 2001).

The concept that active shooter incidents are dynamic incidents and require immediate responses necessitates standardization of related responses and preparedness. The number of active shooter after-action reports continues to grow: Governor's Columbine Review Commission Report (2001), Virginia Tech Review Panel (2007), Northern Illinois University, and the Oslo and Utoya Island, Norway, July 22, 2011 incidents (Ergenbright & Hubbard, 2012). These after-action reports serve to generate a host of emergency response questions and reviews, which can assist public administrators in creating effective systems of preparedness. Fassinger (2011) found that there is a need for empirical research relative to active shooter incidents. As a result, this project used a grounded theory study to examine police agencies in three Michigan counties concerning how they train, collaborate, document, and ultimately prepare for active shooter incidents.

Purpose

The purpose of this grounded theory study was to examine how and what police agencies in three Michigan counties have implemented in preparedness to active shooter incidents, including response and prevention. Recent active shooter incidents at Aurora, Colorado, Sandy Hook, and the Washington Navy Yard provide the impetus for understanding how law enforcement agencies marshal their resources in the time-

sensitive nature of active shooter incidents. The rationale for this study is bent on three dominant reasons: determine the level of police agency active shooter preparedness; measure the consistency of the strategic and tactical objectives of related active shooter policies, procedures, training, technology and equipment; and, finally, provide a basis for recommendations of leading practices and a normative model of active shooter collaboration to increase preparedness effectiveness. This research sought to demonstrate the sharing of law enforcement ideas for more relevant information to enhance police active shooter preparedness, and it would be unwise not to examine this important policing issue.

The three sampled Michigan counties totaled 20 police agencies, including three counties and 17 municipalities. The studied counties are of different sizes, with two counties having populations over 100,000 and one county having a population under 100,000. The studied counties were selected based on their proximity to each other and a convenience sample. The sampled police agencies were composed largely of small police agencies, with only one municipal police department considered to be a medium-sized department with over 190 police officers. The research analyzed the size of each sampled police agency and its government type to include county and municipal (township included as municipal).

The five research questions are composed in a manner that sought to understand police active shooter preparedness. The related data collection consisted of active interviews, examination of written documentation such as policies, protocols, training materials, mutual aid agreements, memorandums of understanding and active shooter training sessions. The questions were based on a theoretical exploratory framework that

thrived to discern recommendations for enhancement of active shooter preparedness systems.

Methodology

The methodology of a study is based on the researcher's objective to answer the research questions (Creswell, 2007). The following research method assisted in the understanding of an issue that has limited empirical literature. In addition, the methodology is based on the study's framework and the underpinning rationale of the research questions (O'Hara, Wainwright, & Kay, 2011). Methodology is composed of procedures that amount to a set of rules, which engage the understanding of research questions (Hammersly, 2010). The following project used grounded theory of which Glaser and Strauss (1967) argued for a distinctive methodological approach that rules against the proposal of hypotheses when conducting qualitative research. In the following methodology assessment, it was determined that a qualitative method would best provide the means to fully answer the research questions and allow for the development of a normative model while discerning themes and nuances.

The nature of this study is to examine and analyze the police active shooter preparedness. Conversely, the study analyzed police collaboration relative to active shooter incident response, prevention, written documentation, and training mechanisms. A qualitative method is best under the circumstances of the phenomena of active shooter preparedness primarily because it is not easily explained in light of limited levels of empirical research. Strauss and Corbin (1990) substantiate that qualitative research is particularly useful for assessing unknown phenomena, distinguishing perspectives on

already investigated phenomena, and articulating phenomena that are not easily explained through quantitative measures. As such, this study used a grounded theory research study because of the relative newness of the researched issue. Moreover, grounded theory assisted in discernment of found nuances and themes relative to police active shooter preparedness.

Research Questions

General Research Question: How do police departments in three Michigan counties prepare for responses to active shooter incidents?

Specific Research Questions:

1. Do police agencies develop strategic[1] and tactical objectives[2] as policies that guide their active shooter incident responses? Is there written documentation of those objectives? Are the strategic and tactical documents linked? Are those objectives and their documents communicated to police personnel?
2. Are the strategic and tactical objectives integrated with training for active shooter incident response? How is that done? What is the nature and scope of the tactical training for active shooter incident response?
3. How do police agencies utilize technology to enhance response to active shooter incidents? How is technology used for training? How is it linked to

[1] Strategic objectives are where the agency wants to be with their active shooter preparedness in one to five years. An example of a strategic objective may consist of an agency aspiring to train 50,000 citizens about active shooter awareness in five years.

[2] Tactical objectives for active shooter preparedness are immediate goals, such as stopping the threat of an active shooter as soon as possible.

active shooter incident strategic and tactical objectives? How is technology used in actual active shooter incident response?

4. Do police agencies collaborate with each other in responding to active shooter incidents? Do they collaborate in strategic policy planning, tactical planning, communications, and technology, etc.? If they do, how is this done? If they do not collaborate, why not?

The general research question attempts to understand the overall system of preparedness that police agencies engage regarding their response to active shooter incidents. The specific research questions examined how police agencies establish and integrate their active shooter preparedness systems with technology, training, and collaboration. The general research question depicts a wider view of police active shooter preparedness and seeks to comprehend the complexity of the overall system used to prevent, respond, and train for active shooter incidents.

Conceptual Framework

An exploratory study was chosen primarily because of the inadequate levels of empirical research on the subject of active shooter preparedness. Pignatelli (2010) and Fassinger (2011) found no academic theories that offered a holistic examination of active shooter preparedness. As a result, police agencies often depend on the expertise of police trade publications to justify their training and response protocols (Dino, 2009). Zarif (2012) contends that grounded theory is an acceptable methodological process in social science. As a result, this study used a grounded theory of qualitative analysis to fully

understand the methods that police agencies engage concerning their preparedness systems for active shooter incidents.

Grounded theory research involves deductive reasoning and is based on data analysis that does not contain preconceived ideas, and allows for more objective research (Masessa, 2013). The notion of not having hypotheses places a priority on the need for active interviews and document analysis that encouraged the researcher to compare and contrast emerging themes. Glaser (1992) and Strauss and Corbin (1990) formulated that in grounded theory, researchers view the data in an unbiased manner for the examination of data themes, which may be categorized for the construction of hypotheses. The coding of the data is based on a systematic process (Henwood & Pidgeon, 2003).

The components of the literature review are associated with analyses of previous responses to active shooter incidents and related recommendations, past and current police tactics and training, and terrorism preparedness and interagency collaborations (see Figure 1). The literature review examined critical studies concerning police responses to active shooter incidents on a national level and how related recommendations have affected police policy, training, and collaborations. The literature review assessed the history of police tactical training and the era of SWAT tactics concerning police response to active shooter incidents. The study attempted to produce a set of principles to systematically improve police preparedness to active shooter incidents through the analyses of issues that police agencies currently face when attempting to create a holistic and comprehensive response to active shooter violence.

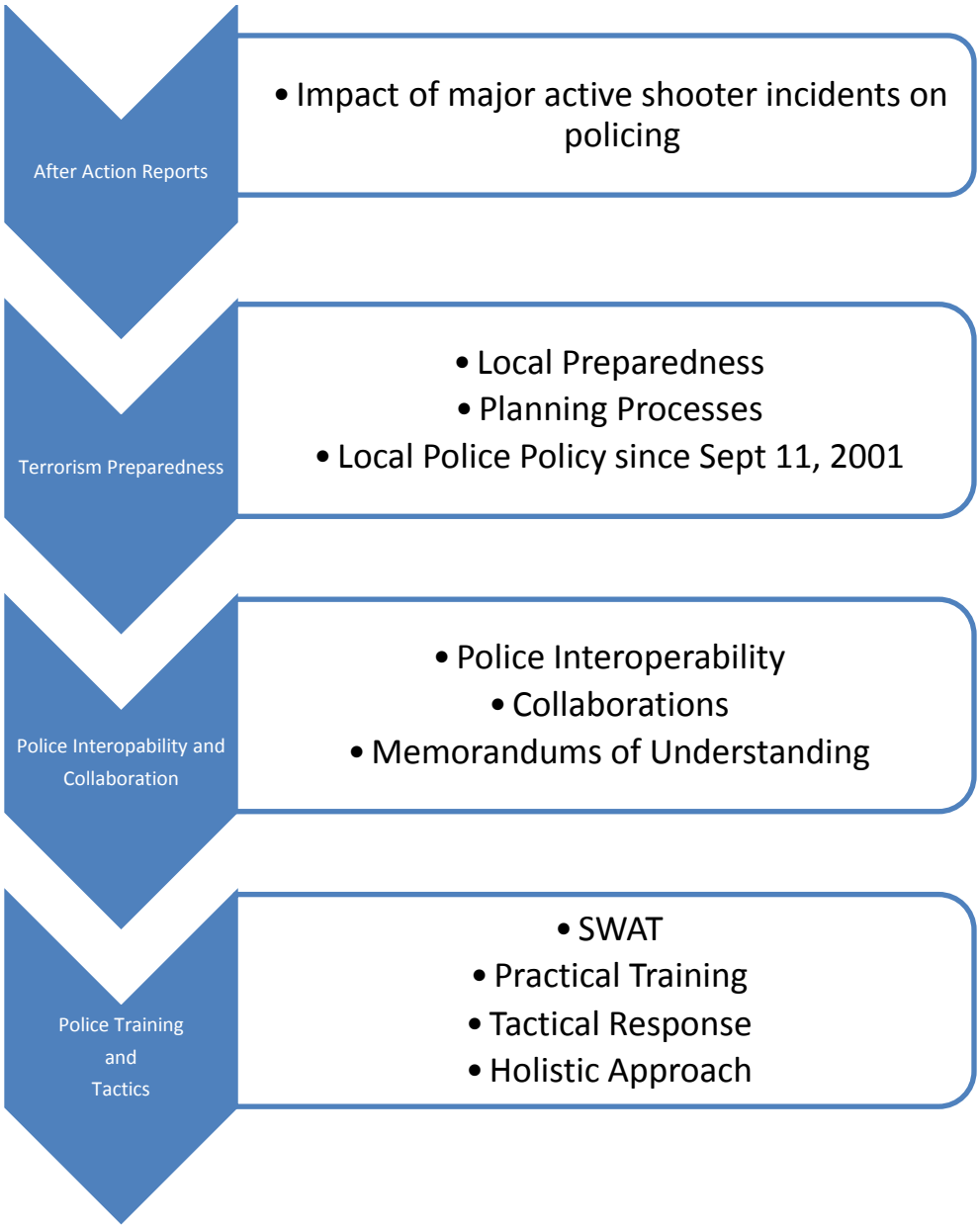

Figure 1. Preparation constructs flow chart.

Definitions

Active shooter incident: The Department of Homeland Security (2012) defines an active shooter as "an individual actively engaged in killing or attempting to kill people in a confined and populated area; in most cases, active shooters use firearms(s) and there is no pattern or method to their selection of victims." Active shooters may also use other weapons to kill during their pattern of destruction.

SWAT: Special weapons and tactics team.

Threat assessment protocols: The holistic examination of behavioral, personality and social factors intertwined in a criminological theory for the purpose of gleaning practical intelligence. Threat assessments focus on the observable behaviors of an individual for the purpose of preventing acts of violence.

Key fob system: An electronic system of door magnetics that allows keyless entry into an area. Often used in buildings to control the number of keys associated with entry and exit into an area. Some key fob systems allow the controlling administrator to lock and unlock doors through the use of computer software.

Simunition: A training system that simulates gun fire and encompasses the firing of a pellet that delivers a marked color to the struck target. Simunition is actually a trademark of SNC Technologies Inc., and allows police and military to conduct more realistic forms of use of force training (Simunition, 2013).

Assumptions

1. Sworn police administrators from a county or local law enforcement agency located in the three county geographical areas were eager to participate in the study.
2. All interviews were conducted in an objective and systematically consistent manner.

Limitations

Active shooter incidents, in general, may occur at a host of locations to which police agencies will be confronted to respond. This dissertation does not have the ability to generalize its findings to all police active shooter preparedness systems. In this grounded theory study, there is a focal point of three Michigan counties and their active shooter preparedness implementations. There are continued limitations with the choosing of a purposive sampling procedure. In addition, the study focused specifically on policy makers and administrators who have decision-making authority concerning active shooter preparedness. Furthermore, grounded theory may not provide the answers to all inquiring readers, and the data analysis further may not provide demanded levels of generalization.

Delimitations

The delimitations of this study will confine itself specifically to the geographical area of three Michigan counties. The focal point of specific police officers and trainers at

the 20 police agencies allows for an in-depth understanding of actual active shooter preparedness systems.

Significance of the Research

The following study of active shooter preparedness is important because it seeks to provide results that may be used to save lives and reduce injuries resulting from active shooter incidents. The research pursues to empower public administrators and citizens with relative information that will assist decision-making processes concerning active shooter preparedness systems. Therefore, the development of strategic and tactical policies relative to active shooter preparedness and analysis of these objectives is significantly needed to address the production of systems that are more effective at protecting our citizens. In addition, police administrators need this information when planning for responses to active shooter incidents in order to increase their critical management of resources and operational and tactical capabilities.

It is clear that active shooter incidents are prevalent in our society and they continue to take their toll on our society, emotionally, physically, and economically. Therefore, studies such as this one are significant to police administration. The study contributed to the empirical literature of active shooter preparedness. The current state of empirical active shooter literature relates mainly to school violence prevention and implementation strategies, which seek to curtail anti-social school behavior but which do not directly address police preparedness systems (Chapell, Hasselman, Kitchin, Lomon, MacIver, & Sarullo, 2006; Frisén, Jonson, & Person, 2007; Molina, Bowie, Dulmus, & Sowers, 2004).

The policy implications of this project conspired to articulate a normative model for police active shooter preparedness of which police agencies may discern guidelines for leading practices. Moreover, this study desired to enlighten governmental administrators concerning training protocols, agency collaborations, and resource deployments. Successful implementation of active shooter preparedness is necessary, especially in the face of deaths and injuries these incidents exert. This paucity of critical literature prevents the emergence of leading practices and unnecessarily compromises public safety. This study will contribute to the academic conversation in the field and further inform policies, protocols, and procedures that take active shooter response training systems to an entirely new level of expertise. In addition, the creation of a summarized article of the results will follow to assist in the facilitation of more police agencies reading the materials. Finally, this research will result in increased safety for citizens.

Methodological and Theoretical Models

The study sought the creation of two theoretical models including a holistic approach (prescriptive model) and normative model of police collaboration. The developments of both the holistic prescriptive and normative models are bent on the confinements of grounded theory methodology. Grounded theory assisted in the production of the normative model, which further to contributed the creation of a holistic approach to active shooter preparedness. The holistic approach is essentially a comprehensive model of multiple related active shooter systems that, when combined, should serve at increasing the effectiveness of police agency active shooter preparedness.

The holistic approach encompasses more than the mere concept of active shooter response and tactics; it further examines prevention and preemption of active shooter attacks. The holistic approach includes an understanding of active shooter prevention systems while ensuring that strategic and tactical objectives support the planning of the entire active shooter preparedness system.

The study engages the construction of an active shooter preparedness collaboration system with the creation of a normative model. The active shooter preparedness collaboration model is based on the assessment of how the surveyed police agencies engaged collaboration when seeking active shooter preparedness. Examination of the active shooter preparedness strategic and tactical objectives assisted with creation of this normative model. Inspection of the written documentation, interviews, and observed training sessions relative to strategic and tactical objectives provided validation for the construction of this model. Furthermore, the methodology of grounded theory assisted in the analysis and development of this model.

CHAPTER II

LITERATURE REVIEW

The primary functions of a literature review are to formulate a solid foundation of which the investigator may gain an in-depth understanding of the problem (Creswell, 2007). This study asked the following general and specific research questions:

General Research Question: How do police departments in three Michigan counties prepare for responses to active shooter incidents?

Specific Research Questions:

1. Do police agencies develop strategic and tactical objectives as policies that guide their active shooter incident responses? Is there written documentation of those objectives? Are the strategic and tactical documents linked? Are those objectives and their documents communicated to police personnel?
2. Are the strategic and tactical objectives integrated with training for active shooter incident response? How is that done? What is the nature and scope of the tactical training for active shooter incident response?
3. How do police agencies utilize technology to enhance response to active shooter incidents? How is technology used for training? How is it linked to active shooter incident strategic and tactical objectives? How is technology used in actual active shooter incident response?
4. Do police agencies collaborate with each other in responding to active shooter incidents? Do they collaborate in strategic policy planning, tactical planning,

communications, and technology, etc.? If they do, how is this done? If they do not collaborate, why not?

The literature review demonstrated limited levels of empirical studies about police response implementation of written documentation, training, and collaborations concerning active shooter preparedness. However, the literature review found numerous police trade articles relative to specific active shooter response tactics. Even with limited empirical research, this investigator was able to ascertain an evolutionary pattern of associated police themes regarding developments in active shooter response systems, training, and agency collaborations.

The best practice model for responses to active shooter incidents has evolved from tactics that included response delays in wait of SWAT teams to one which presently includes trained police officers with an immediate tactical objective to confront and neutralize the active shooter(s). The literature review demonstrates that active shooter responses and training requires standardization of policies and training and victim initiated mitigation (Ergenbright & Hubbard, 2012). Mass shooting incidents such as the Columbine High School and Virginia Tech University shootings articulate the need for interagency collaborations, rapid deployment tactics, and related police policies and training in order to effectively respond (Massengill, 2007).

The literature review examines the historical context of active shooter incidents, focusing on the impacts of major incidents that have implicated police policy changes regarding management, collaborations, and training. The literature of terrorism preparedness advances interagency collaborations as it aligns with active shooter response planning. The literature review demonstrates that the current best practice for

police response to active shooter incidents navigates away from the previous model that depended heavily on a SWAT response. Many police administrators argue that patrol officers and victims are vital components concerning the mitigation of injury and deaths relating to active shooter incidents. The review further demonstrated that a holistic approach to police active shooter preparedness seeks input from multiple stakeholders and embraces technology for citizen incident notification, training communications, response, and entry and infrastructure mitigation.

Active Shooter Summary

The tragedies of past and future active shooter incidents provide the impetus for better public administration management and overall active shooter preparedness. Scalon (2001 analyzed previous active shooter incidents, finding that suicide is a common element of the shooter's systematic planning. Parker (2008), in examination of the Virginia Tech shootings, articulates that active shooters are distinguished from other perpetrators in that they don't have a plan to escape alive. Contrary, the 2012 Aurora, Colorado, active shooter incident challenges Parker (2008) in that police arrested James White immediately after the massacre and lethal force was not used. In addition, many persons correlate the definition of active shooter incidents to that of terrorism (Pignatelli, 2010). However, the police response to an active shooter incident must engage the concept that the perpetrator(s) may or may not have the psychotic motivation to die at the scene and are not necessarily politically motivated during their attacks. Indeed, it is important to examine previous active shooter incidents to facilitate analyses of the

shooter(s)' context for the attack. Examination of this concept provides improved understanding to better train, prevent, and respond to such incidents.

Impact of Columbine Shootings

The shootings at Columbine High School in 1999 were the product of two students, Eric Harris and Dylan Klebold, who utilized semi-automatic weapons and nearly 100 explosive devices with the intent to kill the largest amount of persons possible (Alba, 2011). Harris and Klebold have been described as bullies, who had further been bullied themselves. At the time of the shooting, Columbine High school had no crisis plan but did have school resource officers that were managed by the Jefferson County Sheriff. Some 1,000 police officers responded to the shooting scene after mutual aid was requested by the Jefferson County Sheriff. Moreover, in the after-action report, many citizens criticized the police for their failure to enter the building immediately. In fact, the Jefferson Sheriff's Office reported that police officers did not enter the building until some 46 minutes after the incident started (Governor's Columbine Review Commission Report, 2001).

Prior to the Columbine High School shooting, it was a common tactic for responding police officers to merely contain (surround) the exterior of an active shooting threat area and standby for the SWAT team to confront the shooter(s) (Governor's Columbine Review Commission Report, 2001). The pre-Columbine tactic or often termed as *containment* is no longer considered as best practice for responses to active shooter incidents. Police officers should not standby in a supporting role and wait for the SWAT team to arrive while persons are being killed and injured (Pignatelli, 2010). As a

result, the current standard in law enforcement is for responding officers to immediately enter the threat area with the objective of perpetrator neutralization of the threat (Heinen et al., 2007).

Columbine High School research supports that the use of an incident command system based on multiple agency radio communications should be included in an effective active shooter preparedness system (SyWassink, 2002). Furthermore, the State of Colorado's review of Columbine found that the weaponry and protective gear of the initial responding officers was inadequate when compared to the heavy-caliber weaponry that was often used by the perpetrators. In addition, it was recommended that first responders and school resource officers should receive rapid deployment tactics to actively pursue and apprehend armed perpetrators in buildings (Governor's Columbine Review Commission Report, 2001). The National Tactical Officers Association directly confronted the issues of Columbine and created new rapid deployment techniques for patrol officers to immediately engage perpetrators in similar situations (Governor's Columbine Review Commission Report, 2001)

The crisis of the Columbine High School shootings was truly a tragic event that served to highlight the inadequacies of the police active shooter response. The incident was a wake-up call to a host of concerns in crisis planning, equipment, and police tactics. The United States government, in the wake of the Columbine shootings, created new grant funding streams with which school administrators, with police, could create improved safety systems (Bethel, 2005). In addition, it was recommended that SWAT teams and EMS personnel should further enjoin training operations in order to improve communications with other agencies (U.S. Fire Administration, 2000).

Impact of Virginia Tech Shootings

The Virginia Tech shootings articulated the need to engage crisis management and police tactics regarding responses to active shooter incidents. The April 16, 2007, Virginia Tech shooting left 32 murdered, 27 wounded, and the suicide of killer Seung Hui Cho (Hemphill, 2010). Cho was a 23-year-old senior who had previously been diagnosed with selective mutism, anxiety, and depression. Cho began his attack at 7:15 a.m. when shooting a male and female victim inside a dormitory. Cho then proceeded to change clothes, destroy personal effects, and mail a self-promoting video of himself to NBC News before returning to a classroom building at 9:40 a.m. and opening fire on persons after he had chained the exterior doors (Virginia Tech Review Panel, 2007).

Cho expended some 200 rounds of ammunition in nine minutes while pouring large amounts of bullets into persons. Cho randomly shot a diverse group of persons including different races, genders, and age groups. Cho then shot himself in the head when police began to close in on him. An autopsy of his brain, unlike murderer Charles Whitman of the 1966 University at Texas shootings, did not show any physiological brain irregularities (Rucker & Spinner, 2007). Cho had previously viewed Columbine killers Klebold and Harris as heroes (Virginia Tech Review Panel, 2007).

Bosselait (2010) asserts that after a mass school shooting, it is logical to see demonstrated changes in security and response planning relating to school violence preparedness. Literature of the Virginia Tech incident demonstrates an examination of state and federal policies and practices relating to gun control laws and gaps in mental health care services (Bosselait, 2010). Kellner (2008) stated, “Every time there is a

significant school, university, or workplace shooting, there is discussion of the need for stricter gun laws, but after some brief discussion the issue falls away" (p. 42). As a result of the Virginia Tech shootings, Tim Kaine, then Governor of Virginia, signed an executive order banning the sale of guns to mental health patients that were involuntarily committed to inpatient or outpatient mental health treatments (Kellner, 2008). The Governor's decision seemingly closed a Virginia State loophole that allowed mentally declared ill Seung Hui Cho the legal ability to purchase firearms and ammunition that were ultimately used to kill 32 innocent people (Kellner, 2008)

The Virginia Tech shooting spurred the debate whether students and faculty should be permitted to carry concealed weapons on university grounds (McVey, 2007). Immediately after the Virginia Tech shooting, employees received advanced safety training; however, previous reports indicated that active shooter training for students was being overlooked by the university (Bosselait, 2010; Hoover, 2008). Rasmussen and Johnson (2008) investigated campus security training for students after the Virginia Tech shooting, finding that students believed safety training increased. The Virginia Tech Review Panel (2007) credited the university's public safety department for a successful response to the scene based on the use of an active shooter model.

Terrorism Preparedness

Since the September 11, 2001, attacks on the World Trade Center, local law enforcement involvement with the operational and tactical aspects of terrorism preparedness have expanded (Oliver, 2007). December 25, 2009, should further serve as a strong Michigan argument for increased terrorism preparedness, as on this date a

terrorist flying from Amsterdam attempted to detonate a bomb during the airplane's descent into the Detroit Metropolitan Wayne County Airport, just outside of Detroit, Michigan. Fortunately, the Nigerian bomber was unsuccessful and the 100 persons on the airplane were not injured. Conversely, these incidents of terrorism pose the question, how prepared are Michigan local law enforcement when responding to a terrorist attack?

The ability of local law enforcement to respond to a terrorist attack is described as "America's first line of defense in the aftermath of any terrorist attack" (National Strategy for Homeland Security, 2002). Since September 11, 2001, local law enforcement has seen an increase in federal homeland security grants, which focus on terrorism preparedness and counterterrorism (Davis et al., 2010). Yet, even with increased funding, local law enforcement terrorism preparedness has reported inadequate enhancements (Gerber, Cohen & Stewart, 2007; Hurley-Hanson, Giannantonio, Carlos, Harnett, Jetta, & Mercier, 2008; Katz, Staiti & McKenzie, 2006). Additionally, terrorism preparedness literature is limited when considering a measurement of effectiveness for local law enforcement terrorism response (Caruson & MacManus, 2008; Somers & Svara, 2009; Waugh & Streib, 2006).

The complex issue facing emergency response administrators is that there is no consistent definition relative to terrorism preparedness (Combs, 2009; Hoffman, 2006; Kilroy, 2008). Without a clear definition, it becomes extremely difficult for policy makers to develop and evaluate terrorism preparedness (Kilroy, 2008). Furthermore, to engage the issues of terrorism, police agencies require an operationalized definition with which to build a solid foundation. Many state and local policy makers often define terrorism from United States federal agencies such as the Department of State,

Department of Defense, Federal Bureau of Investigation ,and the Department of Homeland Security (Francis, 2011). However, Kilroy (2008) articulated that each federal agency has a varied definition concerning terrorism. It is this variation that complicates the ability of policy administrators to construct and evaluate plans and preparedness systems.

The notion of a collective definition for terrorism provides policy makers with the ability to methodically engage terrorism preparedness development, implementation, and evaluation. Moreover, a consistent definition will provide emergency first responders with needed psychological stability (Sederer, Ryan, & Rubin, 2003). Additionally, a consistent definition of terrorism relates in part to an increased sense of community security among public safety agencies (Somers & Svara, 2009). This study defined terrorism as articulated by Hoffman (2006):

> the deliberate creation and exploitation of fear through violence or the threat of violence in the pursuit of political change. All terrorist acts involve violence or the threat of violence. Terrorism is specifically designed to have far-reaching psychological effects beyond the immediate victims or object of the terrorist attack. (p. 40)

The initial need for terrorism preparedness policy was mandated by the federal government after the tragic events of September 11, 2001, and sought to encompass municipal collaboration across the United States (Ziskin & Harris, 2007). The federal government provided incentives for preparedness policy through financial assets for those agencies that developed, reviewed, or implemented preparedness policies (Perry & Lindell, 2003). In light of federal financial incentives instituted to motivate state and local government agencies to prepare for terrorism, there still remains no collaborative definition for terrorism preparedness (McIntyre & Myers, 2004).

Although there is no unified definition of terrorism preparedness, there is support for measurement of terrorism preparedness factors (Francis, 2011). Mosser (2007) articulated six terrorism preparedness factors, including communications, equipment, personnel, planning, procedures, and training activities. Typically, assessment factors about terrorism preparedness relate to a focused response, which is viewed as being a reactionary indicator (Bailey & Cree, 2011). Mosser (2007) stated core factors that are essential proactive measures for the engagement of terrorism preparedness. The core factors of preparedness provide support for an operational definition of terrorism preparedness. These factors provide policy administrators with variables that may assist in active shooter mitigation.

The preparedness planning process for emergency management is often defined in terms of subjective discourse (Myers, 1999). It is through this subjective discourse that emergency administrators must be realistic about their resources and abilities to demonstrate successful preparedness plans. Myers (1999) and Alexander (2002) argued that there is an element of flexibility in emergency preparedness that allows emergency administrators to adapt to changes in the environment. Myers (1999) provided the following strategy for the development of an emergency plan, which is in the continuum of preparedness:

> (1) even where there is a low probability that a disaster may occur, a plan remains valuable, however keep the plan simple, practical, and economical for the taxpayer; (2) continuity is the objective. Keep things going in the midst of disaster, but realize they will not be at optimal/normal levels; (3) losses are expected and stabilization will take time; (4) include first responder and citizen participation in the planning process. Emergency managers can easily overlook what is actually practical compared to what is "good theory"; (5) the plan, no matter how detailed or thorough, is a reference document. Flexibility and adaptability are must haves. (p. 60)

Prior to the September 11, 2001 (hereafter referred to as 9/11) attacks on the United States, the notion of local government terrorism preparedness was assessed as being primary a reactionary function. Post 9/11 studies articulated the emerging need for law enforcement to take a more proactive stance regarding their involvement with operational and tactical preparedness systems surrounding terrorism (Marks & Sun, 2007). The initial response to large-scale emergencies and terrorist attacks requires the leadership and resources of local governments prior to state and federal intervention. Furthermore, Somers and Savara (2009) found that local first responders are needed to guide, develop, implement, and enforce preparedness in their localities.

Since the 9/11 terrorist attacks, there have been increased responsibilities concerning terrorism preparedness assigned to local public safety managers, one of which includes the demand to examine vulnerabilities and threats in a more proactive manner (Francis, 2011). It is from this premise that local governments must assess the planning process for the development, implementation, and evaluation of preparedness system regarding the vulnerabilities of an active shooter incident.

Schein (1999) argued that whenever there is a change from a reactionary system to a proactive system of government, there is a leveled resistance by some stakeholders. However, public managers must seek the development of relationships internally and externally to facilitate the necessary change of preparedness for their organization. Garwin, Pollard, and Tuohy (2004) conveyed that the use of coordinated objectives provides a foundation for an organized response to terrorism and other major disasters. It is through this approach that emergency responders and managers seek to increase their confidence levels when responding to such tragedies.

However, challenges for local government to engage the concept of terrorism preparedness continue to exacerbate local (Gerber, Cohen, Cannon, Patterson, & Stewart, 2005; Hillyard, 2003; Swartz, 2005) and rural governments (Bailey & Cree, 2011). As a result of contemporary social, political, and economic conditions, many local governments are experiencing organizational changes (Barrilleaux, Cheung, & Carsey, 2006). It is through these changes that the need for evaluation of preparedness to large-scale disaster, natural or man-made, exists. Barilleaux et al. (2006) argued that the need for organizational changes to emergency management policy may demonstrate an increase in demand by local governments to seek the federal government to enact policy reform and legislation. Yet, the federal government has provided limited guidance for terrorism preparedness (Pelfrey, 2007). Such federal directives from the Department of Homeland Security (Pelfrey, 2007) and the *Homeland Security Presidential Directive* have been viewed as "elusive and contradictory" (Oliver, 2006, p. 51). Conversely, the notion of increased local reliance on the federal government regarding terrorism preparedness articulates the need to create and clearly define local terrorism preparedness.

Collaborations and Interoperability

Recommendations from after-action reports concerning Columbine High School (Governor's Columbine Review Commission Report, 2001) and Virginia Tech University (Virginia Tech, 2007) suggest that police response to active shooter incidents require multi-agency collaborations. Frazzano (2010) argued that because of operational and capability limitations, many police agencies, specifically the smaller jurisdictions, must

engage the concept of collaboration and cooperation when preparing for active shooter incidents involving terrorists. In addition, the International Association Chiefs of Police (2005) provides that regional collaborations are a requisite for addressing terrorism, information sharing, and disaster management responses.

Contemporary scholars emphasize the conceptualization of local partnerships to adequately address terrorism preparedness and other large-scale disasters. Caruson and MacManus (2008) and Somers and Svara (2009) provide that the ability of local governments to form regional partnerships strengthens homeland security preparedness and response. Russell-Einhorn, Ward and Seeherman (2004) found that law enforcement agencies benefit from local collaborations by pooling limited material resources to pursue systems that increase public safety and avoid duplication of governmental services.

Alter and Hage (1993) provided that most organizations gravitate toward systems of cooperation with other similar typed organizations, mainly because of the need to survive. DeLone (2009) articulated that police organizations typically cooperate with other police agencies primarily to reach organizational goals concerned with performance, production, and other activities related to crime and social control. Furthermore, because of political stimulus, some governments engage in a multilateral approach consisting of "many loosely connected participants" (DeLone, 2009, p. 37). He defined loosely connected as those connections and interdependencies that exist between different organizations. It is through this pattern that many police agencies are provided the necessary impetus to engage collaborative and multi-agency systems concerning their responses to active shooter incidents. Most police agencies, because of their operational and tactical capability limitations, must engage partnerships in preparation for terrorism

(Frazzano, 2010). Mandell (1990) found that when police agencies cooperate with other agencies, they often facilitate a better management of resources. The issue of effective management of public resources in preparation of policing emergencies articulates the advancement of collaborative policing. Zeemering and Delabbio (2013) argued that a foundation of trust between governments allows for the creation of a general framework of cooperation when planning details of a particular shared government function.

The desire to mitigate the public safety effects of an active shooter incident maintains that, by its very nature, it is a governance problem that discerns proper planning. Frazzano (2010) uses the term *inter-local cooperation* when asserting that governments should engage regional planning approaches concerning the creation of effective responses to active shooter incidents. Frazzano advocates that bordering police agencies should collaborate and standardize their active shooter response to address capability limitations. Even the largest of police agencies may need the immediate assistance of bordering police agencies if there are multiple simultaneous attacks in their jurisdiction, as demonstrated in the Mumbai, India, terrorist attack of 2008 (Frazzano, 2010).

The literature demonstrates that the word *collaboration* lacks a common lens or definition (O'Leary & Vij, 2012). Gray (1989) defines collaboration as the dynamic process in which two or more interdependent stakeholders combine their resources in a manner that serves a mutual benefit. Bardach (1998) defines collaboration as "any joint activity by two or more agencies working together that is intended to increase public value by their working together rather than separately" (p.8). The literature on police

agency collaboration regarding police response to active shooter incidents is limited at best.

The challenges and strategies associated with collaborative activities continue to evolve in the arena of policy making. First, collaboration involves multiple stakeholders that represent a host of organizations, interest groups, and citizens with a significant stake in the outcome (Gray, 1989). Second, collaboration promotes those participants in the process to engage their creativity in consensus building (Gray, 1989). Finally, collaboration tends to produce significant mutual agreements that not only demonstrate social and organizational change, but tend to be more effective in uncertain and complex policy contexts. Oleary and Vij (2012) argued that the public challenges of contemporary times are often too large for any one organization to address without the advent of collaboration.

There is further the need for government agencies to engage the concept of interoperability when seeking to collaborate on responses to active shooter incidents. On the issue of active shooter response, Dino (2009) defined the concept of interoperability as "an operation that is jointly undertaken" (p. 39). Kean and Hamilton (2004) observed two interoperability issues of local government emergency response during the September 11, 2001, World Trade Center bombing: (1) failure to have radio interoperability where emergency responders could share critical information during response, and (2) local resources were overwhelmed during the response. The notion of police interoperability via radio communications during critical incidents is extremely vital for police officer and citizen safety (Governor's Columbine Review Commission Report, 2001). Police communication interoperability is a collaboration issue. The

September 11, 2001, terrorist attacks clearly defined the need for communications interoperability of first responders when called to respond to a large-scale incident.

Band and Harpfold (1999) demonstrated that the first step of collaboration is the design of a memorandum of understanding, which is followed by planning development and joint training. Calls for collaboration have led to multiple successful interagency partnerships with police agencies. One form of police collaboration is the Law Enforcement Council, which pools member agency resources and capabilities by sharing equipment, knowledge, and personnel (Metro-LEC, 2007). Schnobrich-Davis and Terrill (2010) found that multi-jurisdictional law enforcement collaborations strategically develop on regional bases to address problems that expand the capabilities of singular police agencies and are often based on mutual aid agreements or memorandums of understanding. Memorandums of understanding are used in collaborations to explain agency responsibilities with the intent to minimize potential disagreements (Russell-Einhorn et al., 2004).

Some researchers have focused on smaller sized police jurisdictions when seeking to demonstrate the need for agency collaborations (Clovis, 2008; Frazzano, 2010; Giduck, 2005; Walker & Katz, 2008). Giduck (2005) stated that police agencies are understaffed. Moreover, Walker and Katz (2008) articulated that the average police agency is small and consists of approximately 18 sworn police employees. Police agencies are 24-hour operations, which further reduces the number of police officers that may be working on a particular shift. Clovis (2008) examined local government terrorism preparedness, finding that the capacities of small jurisdictions are somber and there is clear need to collaborate with other agencies. Frazzano (2010) stated, “The

problem these smaller jurisdictions face is how to marshal support, in a time sensitive environment, from other jurisdictions so that all participants have common tactics, common communications, capabilities and a common lexicon for seamless, effective operations" (p. 2).

Giduck (2005) sustains that local law enforcement is not only understaffed but underfunded, which further hinders their ability to properly respond to critical incidents. It is from this perspective that police collaboration during critical incidents necessitates the reasoning for multi-agency training and associated plans. Giduck (2005) articulated that local jurisdictions should engage the incident command system and further train with sister jurisdictions that will likely provide assistance during critical responses. The Virginia Tech Public Safety Department credited its immediate response to the 2007 University shooting to its ongoing training and collaboration with neighboring police jurisdictions, including the Blacksburg Police Department (Virginia Tech Review Panel Report, 2007). The Governor's Columbine Review Commission Report further recommended the need for local law enforcement entities, federal and county, to enjoin the concept of regular interagency training and planning for worst-case scenario emergencies (Governor's Columbine Review Commission Report, 2001).

Background of the Active Shooter Response

An historical examination of previous police responses to active shooter incidents provides rich data concerning the formulation of current and future response preparedness. This analysis seeks to understand what went wrong with the SWAT model during the Columbine High School mass shooting. Furthermore, each active shooter

incident involves its own unique set of variables and environmental concerns, which police administration must navigate for effective responses. Active shooter incidents are often spontaneous incidents that necessitate the police administration in having preparation tactics that can be applied to multiple types of locations, attackers, and weapons. The New York Police Department (2012) used an open Internet news source search to compile a list of 281 active shooter cases (202 resulted in casualties) from 1966 to 2010, finding that there is no distinctive demographic (except male shooter) or environmental pattern that explains where and how an active shooter incident may occur: (1) Sex of the attacker was overwhelmingly male; (2) Age of attackers peaked at 15-19 (data primarily school building attacks) and 35-44 years old; (3) 98% of the incidents had only one attacker; (4) Attacker locations 29% (schools), 23% (commercial), 13% (office), 13% (factory), and 22% (other); (5) 237 of the incidents occurred in the United States of America; and (6) 36% of attackers had more than one weapon.

The 1966 University of Texas at Austin active shooter incident showed 30 injured and 16 killed and is credited as being the stimulus for the SWAT-model as the best approach for mass shootings (Illinois State Police Academy, 2003). Previous to the SWAT-model, patrol officers responded to all shooting incidents in an aggressive manner with the intent to neutralize the threat (Dino, 2009). The responsibilities and accountability of police officers regarding active shooter incidents have evolved since the 1966 University of Texas at Austin incident. Former Marine Charles Whitman, after murdering his mother and wife, entered the university's clock tower with six variations of firearms and hundreds of rounds of ammunition before starting his killing spree. Whitman's spree ended when responding police officers killed him. The debriefing of

the incident was the stimulus for police administrators to develop and implement a group of highly skilled and tactically trained police officers to respond to future such incidents, thus SWAT teams were born (Borelli, 2005).

During the 1970s, many police departments encompassed officers that were returning from the Vietnam War, which affirmed their capabilities and demonstrated an increased number of SWAT teams to handle critical incidents (Borelli, 2005). In addition, U.S. civil disturbances and acts of terrorism necessitated the need for police agencies to re-examine their tactical abilities to handle critical incidents of violence (Klatt, 2008). The literature credits Sergeant John Nelson of the Los Angeles Police Department for creating the first SWAT team (Balko, 2006; Los Angeles Police Department, 2006). SWAT teams were often limited to larger agencies that had more fiscal resources. However, President Reagan's War on Drugs created new funding streams, which translated into the creation of more SWAT teams (Klatt, 2008).

By the 1990s, it was found that 90% of all police departments with populations over 50,000 had one or more tactical units, which were twice that of the mid-1980s (Kraska & Kappeler, 1997). This reliance on SWAT teams distinguished patrol officers from those that were tactically trained to handle active shooter incident. The Jefferson County Colorado SWAT team was used during the deadly shootings at Columbine High School in Jefferson County, Colorado, on April 20, 1999. The tragic incident of Columbine resulted in 15 deaths, 160 triaged victims, and 24 seriously injured (Alba, 2011). During the Columbine High School shooting, the Jefferson SWAT team was assisted by a host of other surrounding SWAT teams from the Littleton Police Department, Denver Police Department, Arapahoe County Sheriff, and Colorado State

Police (Heightman, 1999). Sanow (2007) argued the ineffectiveness of the SWAT model, citing that the average time frame for a SWAT team to arrive on scene and be fully set up was some 50 minutes. The shootings at Columbine High School drew skepticism to active shooter tactics that wait for SWAT teams to arrive, arguing that active shooter incidents require a faster response than is allowed by the SWAT model.

Present Active Shooter Tactics

The literature on active shooters has overwhelmingly argued that the perpetrator in these situations is not motivated in surviving a police encounter (Dino, 2009) and suicide is usually a part of the plan (Scalon, 2001). A 2011 study of 281 active shooter cases demonstrated that 86% of the attacks were resolved through violence and 40% reported suicide or attempted suicide of the active shooter. Pre-Columbine patrol officers trained for active shooter incidents with a heavy reliance of containment of the area for the distinctive purpose of establishing the necessary time to slow the attacker's mental and physical processes so that special weapon and tactics teams arrived on scene to either negotiate or engage the threat (Baker, 2005). Dino (2009) argued that this tactic is ineffective in the minimization of deaths and injuries when patrol officers do not intervene with the shooter. Active shooter police tactics have evolved from the slow methodical response of SWAT to that of a rapid assessment of the incident proceeding with immediate and dynamic engagement with the perpetrator (Scalon, 2001).

The current state of active shooter tactics is based on a rapid deployment of police officers to the threat area with the intent of immediate neutralization of the shooter(s). This deployment tactic is based on lessons learned from the Columbine shooting, which

articulates the need for a swift and immediate response. Police use of force instructors, like Ron Borsch of the Southeast Area Law Enforcement Regional Training Academy, argue for single-officer tactics when responding to active shooter incidents. Borsch (2009) found that physical intervention to stop the shooter takes place 50% of the time, noting that in two-thirds of these physical interventions, it was unarmed civilians that were responsible for halting the accused's violent actions. One of the attributes of this tactic is that police officers will assess if the violence is active and move past wounded persons to neutralize the threat.

The issue of how to train police officers relating to active shooter tactics is a concern for public administrators and society. Police active shooter training and policies have changed significantly since the Columbine High School shootings (Fassinger, 2011). Most recently, James Holmes, a 24-year old graduate student, entered the Century Aurora Colorado 16 movie theater and shot 71 persons (largest mass shooting in U.S. history). Holmes killed 12 and injured 58 as police officers arrived on scene 90 seconds after the first call. The Aurora, Colorado, active shooter incident differed from the Columbine High School and Virginia Tech shootings in that the accused did not commit suicide (Glionna, Pearce, & Landsberg, 2012).

The current state of active shooter tactics is based on rapid deployment police officers that are trained to engage and neutralize the threat. The training for this type of tactic is based on the immediate deployment of multiple police resources. This tactic often entails joint operations of police mutual aid. The concept of these deployment tactics is primarily based on lessons learned from the Columbine shooting (Dino, 2009). Moreover, police active shooter training must provide a best method approach to active

shooter responses that it is based on the organizational abilities of each police agency. The issue of how to train police officers relating to their response to active shooter incidents remains a viable concern for a myriad of stakeholders.

In assessment of the norms of police officer responses to active shooter incidents, it is vital to seek understanding concerning the intrinsic values associated with the social institution of policing. Skolnick (1994) articulated the concept of the "working personality," which defines concepts that shape the police officer subculture by noting two central elements of danger and authority. The police culture encompasses the attributes of danger and authority, which serve to create an environment of police isolation from the public (Skolnick, 1994). Police institutions, like other organizations, incorporate norms and values but also include systems of work group solidarity, which is based on external isolation. Crank (1998) wrote that "police stand apart, their occupation is inherently offensive to democratic process, yet they and they alone can act as protectors of society" (p. 61). Bittner (1970) defined the police role as a mechanism for the distribution of non-negotiable coercive force, which is applied based on an intuitive grasp of situational exigencies. The above articulates that police active shooter preparedness will demonstrate difficulty in forming collaborations with non-police institutions concerning dangerous tactical and strategic planning involving active shooter incidents. Essentially the police subculture, by its very nature, creates this vacuum of barriers that hinder collaboration and focus heightened resources and attention on tactical objectives relating to a reactionary response.

Police institutions embrace the formal structure of a paramilitary bureaucratic system (Manning, 1977). Police officers are formalized to operate in unpredictable

environments under the structure of written regulations, policies, procedures, and hierarchical supervisory chain of command (Ramsey, 2012). However, even in the midst of bureaucracy and hierarchy, police officers operate in a working environment that Manning (2007) describes as a "loose confederation of colleagues" (p. 52), which determines how police officers interpret their duties and obligations. This structure assists in the promotion of specialized groups such as SWAT and other police positions and programs, which seek to support the argument that policing must be carried out by highly trained professionals (Manning, 1977).

Police training is designed in a manner that attempts to standardize and predict police officer responses to a variety of situations. Ritzer (2008) studied the restaurant chain McDonalds, finding that training programs indoctrinate their employees to the working culture of the organizations such as bureaucracies and the policing environments. Law enforcement training, for the most part, is largely conducted in a specific matrix of instruction (Ramsey, 2012). Some police agencies are currently engaging the concept in their training models. However, police administrators understand that not every situation police officers face can be controlled with scripted training, policies, and regulations (Lansing Police Department Field Training Program, 2010).

Sanow (2007) provides that police officers engage in annual active shooter response training. In most law enforcement circles, police officers are trained to make a rapid assessment of the incident and form assault teams to enter the threat area (Dino, 2009). The police active shooter response is called a variety of nomenclatures, including active shooter response teams, quick action deployment, immediate action rapid

deployment, and the diamond formation (Dino, 2009). Present active shooter tactics focus on immediate threat neutralization and allow for individual officer discretion concerning whether or not to wait for back-up responders.

The police use of an assault or contact team is consistent with the responding officer's policies and training. Police officers are provided a priority scale of life during active shooter response training, which mandates the ordering of life to be first, innocent victims; second, police officers; and third, the suspect. The police active shooter response team's primary mission is to immediately contact the shooter(s) and neutralize the threat either through verbal or physical force. The responsibilities of the contact team are to move toward the shooter in an organized fashion while the team leader communicates dynamic information to other police officials. The officers should have the necessary equipment, which may include breaching tools to open doors, assault rifles, ballistic helmets, tactical vests, additional handcuffs, magazines, ammunition, and first aid equipment (Dino, 2009).

The active shooter response team leader of the incident is elected based on the level of tactical experience he or she may have, and not necessarily rank (Dino, 2009). The team leader orders the direction of the team's positioning during the incident. The contact teams may consist of as few as one or two sworn officers in a worst case scenario, but the ideal team consists of three, four, or five responding officers (Yanor, 2007). The responsibilities of all team members include stopping the violence, limiting the movement of the assailant, continuing past victims while pursuing the assailant, and reporting progress and intelligence to supervisors and other police officials (Yanor, 2007). The contact team will use an array of approach tactics that serve to swiftly contact

the shooter(s) while maintaining advantageous positioning under the circumstances. This investigator will not discuss those specific tactics because of their confidentiality and sensitive nature. In addition, the contact team is responsible for the observation and reporting of improvised explosives and other threats while searching the area of concern.

It is noted that only one contact team operates in a building or area unless directed otherwise by the overall incident commander. When more than one contact team is used, the divided teams will operate on independent radio channels, if available. Moreover, the contact teams will secure their assigned areas of responsibilities and then hold their positions until directed to do otherwise by the incident commander. The incident commander's duties include establishing logistical control of all officers, establishing a liaison between the police and the victim's family, disseminating accurate intelligence, establishing an inner and outer perimeter, monitoring site security, and deciding the function of additional teams such as medical, non-medical, and tactical. Oldham (2011) stated that supervisors should be trained on what to do during and after an active shooter incident, which includes overall management of the entire scene, including police and fire resource deployments; state, federal, and private resource allocations; media staging; investigation protocols; and related victim issues and concerns. The National Incident Management System is engaged as a proactive measure to mitigate confusion during such critical incidents.

Every jurisdiction faces the possibility that an active shooter will engage in a violent attack on its citizens. The aforementioned tactics were expanded in layman terms to protect the confidential nature of specific formations. Dino (2009) argued that police active shooter tactics demand police to behave more militarized, which may necessitate

officers walking past injured victims while pursuing the assailant. Giduck (2005) reveals that the active shooter response forces police officers to think of the incident as a battleground. Active shooter training protocols should provide psychological training to assist officers with the process that may have to hunt and kill a human being. Sanow (2007) asserts that training of patrol officers in active shooter tactics is a small issue in comparison to the battle police agencies face when addressing needed funding circles to purchase active shooter equipment.

While there is no specific legal obligation for police officers to put their lives on the line, they are expected to behave in a manner that is consistent with their background and training. There should be clear departmental policies to assist police officers with their obligations during active shooter incidents. Green, Lynch, and Lynch (2013) provided that there is potential for civil liability for not acting accordingly to accepted best practices when responding to an active shooter incident. As a result, there is clearly a moral and legal obligation to engage active shooter preparedness.

Police officer training experienced a paradigm shift regarding terrorism after the 9/11 World Trade Center incident and after the 1999 Columbine High School shooting incident (Dempsey & Coffey, 2006). There is consistent support that police agencies should train for active shooter incidents. However, there is limited empirical literature that explains how much training is needed to affect a proper response. Dempsey and Coffey (2006) recommend the following criteria for active shooter response: (1) professional training for police; (2) development of planned protocols for response and familiarization of high profile buildings; (3) access to requisite military styled firearms other than handguns; (4) police officer cover and concealment that emphasize tactics

during response arrival; (5) acknowledgement of suppressive fire movement; (6) contact team formations, movements, and related responsibilities; (7) familiarity with breaching tools; (8) mental state preparation for moving past injured victims and possibly shooting and killing the assailant; and (9) scene recovery mitigation and investigation security responses.

Holistic Approach

There is a stark divergence concerning the 10- to 15-minute average duration of an active shooter incident (Department of Homeland Security, 2012) and the average police response times to such incidents. Drysdale, Modezeleski, and Simons (2010) found that police response to the majority of active shooter incidents at institutions of higher education is 18 minutes, which exceeds the duration of most such events. Essentially, during most active shooter incidents, there will be a period of time where the police will not be on the scene and citizens will be forced to engage decision-making processes whether to run, hide, or fight. As a result, it appears rational to provide citizens with a skill set that may reduce their risk of injury or death during an active shooter incident. Therefore, public administrators should be tasked with a model of which not only to make their citizens aware of active shooter incidents, but to provide them with training to mitigate the danger. A holistic approach to police active shooter preparedness embraces the concept that police resources are finite. Therefore, police must address active shooter response and prevention techniques.

The holistic approach to police response to active shooter incidents includes but is not limited to the following: related police protocols and training, threat assessments

systems, community awareness and outreach, legal support, business communication and relationships, emergency notifications systems, employee accountability, proper use of technology and physical security/hardening systems, and capabilities to address casualties and triage. Flynt (2013) asserts that a holistic approach to active shooter response consists of programmatic and operational frameworks, which include leadership

Alignment with related policies, procedures, and training is based on input from a myriad of stakeholder communication that seeks to engage the shooter(s) by deterrence, detection, denial of access, active response, and recovery from the active shooter incident. The holistic police response to active shooter incidents involves planning, training, and participation from the entire community. Moreover, public administrators should encompass an organizational framework that guides the actions of the police and citizens before, during, and after active shooter incidents. In providing such a model, public administrators must seek input from the broadest spectrum of the community.

Ergenbright and Hubbard (2012) contend that the law enforcement response to active shooter incidents is operationally limited, stating "law enforcement capability to reduce the rate of kill in active shooter scenarios is limited by the separation of time and space between the threat and first responders at the outset of the incident" (p. 30). This issue of police response time is bent on the following common steps regarding an active shooter incident: (1) citizen alert to emergency responders, (2) emergency dispatch of citizen information, (3) police response, and (4) ultimately neutralization of the reported threat. It is simply unrealistic to believe that it is possible to have police resources on the scene for every possible active shooter incident before it occurs; therefore, time and space will always be a viable issue. As a result, there is a need for physical security literature

that examines a host of victim mitigation systems, including victim response, facility hardening, and casualty triage.

Moreover, Ergenbright and Hubbard (2012) argued that threat assessments and law enforcement interdictions are operationally limited for active shooter prevention and preemption, whereas technological and facility upgrades could mitigate the rate of victims killed during active shooter incidents. An active shooter preparedness system of facility upgrades is similar to the actions of the U.S. Fire Administration that uses a systematic coding of building compliance requirements, fire extinguishers, sprinklers, and other requirements to mitigate fire casualties (U.S. Department of Homeland Security, U.S. Fire Administration National Fire Data Center, 2007). A holistic approach to police active shooter preparedness is first based on prevention and preemption. For law enforcement, the Department of Homeland Security, in its active shooter preparedness information, recommends active shooter threat assessment protocols that seek to profile and investigate potential active shooter(s) (Department of Homeland Security, 2012). Threat assessment systems may provide police agencies with useful information of which to prevent active shooter incidents.

The Department of Homeland Security advocates a system of plans and techniques concerning what victims can do to mitigate their contact with active shooters. The actions of victims during an active shooter incident are based on three planned steps: (1) evacuate, (2) hide out if unable to evacuate, and (3) take physical actions to prevent or incapacitate the gunman from his or her goal to kill persons (Department of Homeland Security, 2012). Ergenbright and Hubbard (2012) also recommended the Advanced Law Enforcement Rapid Response Training Manual (Texas State University, 2007), which

includes the following actions: (1) avoid the gunman and exit the threat area, (2) deny the gunman physical contact by locking and barricading themselves from the threat area, and (3) physically defend themselves by improvising weapons to neutralize the threat. Arguably, police agencies should recommend and train effective tactics, which community members can learn and execute when necessary. The above plans provide citizens with active shooter awareness. Tactics concerning victim mitigation should be recommended by police and disseminated to the public.

Ergenbright and Hubbard (2012) argue for a victim initiated migration system that includes five technological components: (1) emergency call boxes with access to two-way communications for real time data exchanges, (2) electromagnetic door releases, (3) staffed incident command center, (4) mobile hand-held radio communications that interact with the emergency call boxes, and (5) key fobs and proxy readers to lock and unlock doors. The arrangement works similar to a fire alarm system that initiates fire sprinklers and other alarms when prompted. Ergenbright and Hubbard's system with the incident command center would have the ability to reduce the threat area via door locks and further communicate real-time visual and auditory information and notifications to first responders and citizens. Ergenbright and Hubbard's system includes gunfire detection capabilities that prompt facility alerts and physically change the environment. The issue involved with Ergenbright and Hubbard's victim initiated migration system is its high cost to implement, which might be best answered by a risk-management cost benefit analysis.

Victim initiated migration systems provide informative information concerning approaches to active shooter preparedness that address the issue of a comprehensive

approach. This victim initiated migration system contributes to the literature of active shooter preparedness by demonstrating the reflection of a better theory for active shooter preparedness to develop. A holistic approach views this system as pertinent information to increase the effectiveness of the state of active shooter preparedness.

The concern regarding a holistic approach to police to active shooter preparedness is based on the notion that there will be an exchange of information between the police, business, schools, citizens, and other agencies concerning tactics, threat assessments, and procedures to minimize the casualties of active shooter violence. The police must inform stakeholders concerning methods that may be effective in stopping violent mass attacks while in the planning and research stages and also while the incident is active.

CHAPTER III

METHODOLOGY

This research project is based on the use of a qualitative model that is integrated with the practice of grounded theory methods. Creswell (2003) defined a qualitative study as "an inquiry process of understanding a social or human problem, based on building a complex, holistic picture, formed with words, reporting detailed views of informants, and conducted in a natural setting" (p. 94). In qualitative research, a model initiates from a general assumption of the key issues that progress to provide meaningful data analysis (Creswell, 2007). Research models are best when they employ data analyses from participant experiences and related documents (Strauss & Corbin, 1998). This form of research allows for an exploratory model that utilizes in-depth interviewing and related document analysis to identify, prioritize, and develop new theory as concepts emerge.

Police agencies respond and train for active shooter incidents based on the justification that society has a responsibility to seek models that increase public safety. Unfortunately, there is a demonstrated paucity of empirical research concerning police response to active shooter incidents, which merits this study (Fassinger, 2011; Pignatelli, 2010). In addition, Creswell (2007) asserted that qualitative studies are highly effective for emerging issues that have inadequate levels of academic research. Robson (2002) found that exploratory techniques could generate hypotheses in cases that encompass limited empirical research. A qualitative study assists the researcher that seeks to

investigate emerging subjects for the sake of theme development (Charmaz, 2008; Creswell, 2007). Utilizing a qualitative model, a holistic assessment of active shooter response including related training, policies, and collaborations is studied based on the research questions (see Figure 2 below).

Grounded theory has been found useful in the examination and assessment of emerging trends that include live experiences for data collection, analysis, and theory development (Creswell, 2007). Essentially, grounded theory is built through the researched materials and then "grounded" in the data analysis (Robson, 2002, p. 190). Creswell (2007) defined grounded theory where

> the researcher attempts to derive a general, abstract theory of a process, action, or interaction grounded in the views of participants in a study. This process involves using multiple stages of data collection and the refinement and interrelationship of categories of information. (p. 14)

Through constant comparison of the data, the investigator finds core categorical relationships (Robson, 2002). The categories are then linked to formulate a unique datum, which is crafted to capture the holistic assessment of the issue.

The grounded theory model has a common analytical process based on specific stages, including (1) comparison of developed concepts from the interview data, (2) the formulation of key concepts discovered and an annotation of relationships, (3) the researcher has some level of discretion in disregarding irrelevant concepts, and (4) development and assessment of the theory (Glaser & Strauss, 1967). This level of flexibility allows the researcher some creativity while maintaining a heightened state of scientific objectivity (Babbie, 2007). The analytical process of grounded theory then continues through the stages of "development, refinement, and interrelation of concepts"

(Charmaz, 2008, p. 510). The study will attempt to locate key theoretical constructs that hinder successful police collaborations relative to police response to active shooter incidents.

Figure 2. Research question flow chart.

In the following study, a grounded theory should facilitate the ability to delve deep into the focus of active shooter preparedness while understanding the experiences of the police representatives that implement related policies and procedures. The goal of this researcher is to gauge the data in a manner that assesses police nuances that may not be identified with a quantitative study (Creswell, 2007). The study seeks to identify themes and leading practices. Finally, the study purposes to connect the found concepts for the development of a grounded theory (Charmaz, 2008).

The focal point of this investigation is based heavily on the interviews of police officials and a document analysis of police training, technology, policies, and collaborations involving police response to active shooter incidents. Through the interview process and correlation of the document analysis, the investigator will produce a normative model relative to police active shooter collaboration.

Research Questions

General Research Question: How do police departments in three Michigan counties prepare for responses to active shooter incidents?

Specific Research Questions:

1. Do police agencies develop strategic and tactical objectives as policies that guide their active shooter incident responses? Is there written documentation of those objectives? Are the strategic and tactical documents linked? Are those objectives and their documents communicated to police personnel?

2. Are the strategic and tactical objectives integrated with training for active shooter incident response? How is that done? What is the nature and scope of the tactical training for active shooter incident response?
3. How do police agencies utilize technology to enhance response to active shooter incidents? How is technology used for training? How is it linked to active shooter incident strategic and tactical objectives? How is technology used in actual active shooter incident response?
4. Do police agencies collaborate with each other in responding to active shooter incidents? Do they collaborate in strategic policy planning, tactical planning, communications, and technology, etc.? If they do, how is this done? If they do not collaborate, why not?

The research questions provide a manner in which to examine the policy objectives of each surveyed police agency. The research questions further seek to understand how police agencies integrate their active shooter strategic and tactical objectives with their training, collaborations and technology. The grounded theory study seeks to recognize the nuances associated with active shooter preparedness collaborations. The answers to the research questions are obtained through examination of face-to-face interviews and agency written documentation on the subject of training and policies.

Population

The population of this study consists of three counties in the state of Michigan that border each other. The counties include a combined total of 24 sampled police

agencies. Of the 24 police agencies, a total of 20 participated in this study. The counties are described as one rural and two suburban. The reasoning for this selection is based on the diversity of the county types and their relationship with municipal and township police agencies. Zinna (1999) found that the majority of school active shooter incidents occurred in rural and suburban areas, which are consistent characteristics of the chosen population.

Sampling and Selection Criterion

Police agencies from three Michigan counties were chosen for the sample and selection of this study. Moreover, the study assesses police interoperability and collaborations regarding responses to active shooter incidents. As a result, a convenience sample of three counties that jurisdictionally border each other was chosen. The notion that the sampled counties border each other further assists in understanding how they collaborate through mutual aid agreements and capability needs.

The investigator further chose these three counties because representation of this sample was limited and not best served in a random capacity. In addition, all three counties have SWAT teams, which will be useful in assessment of whether a SWAT or patrol officer response to an active shooter incident is perceived more effective. The resulting criterion was created not to generalize all types of police response units, but to develop a theory on police response to active shooter incidents.

Data Collection

The data collection of this project is based on the structured pattern of qualitative research. The data collection method is a vital process needed to explore the five research questions. Charmaz (2008) stated that methodology has the ability to provide a macro view of the studied problem. Creswell (2007) articulated the following qualitative data collection types: observations, interviews, documents, and audiovisual materials. The use of a grounded theory study will assist in the mining for rich and in-depth police response active shooter data.

The initial data are assessed from the after-action reports of active shooter incidents at Columbine High School in 1999 and at Virginia Tech in 2007. These after-action reports provide recommendations concerning police policies, procedures, training, and relative collaborations. The literature review is assessed to explore the previous recommendations and reform models for police active shooter preparedness. Grounded theory starts with a wide lens of exploration, which becomes narrower through the specific focus of data collection points (Charmaz, 2008).

Prior to the start of data collection, the investigator submitted the requisite documentation needed to the Human Subjects Institutional Review Board (HSIRB), in accordance with the requirements of the Western Michigan University Board of Trustees. The HSIRB assessed the interview questions for potential harm to the interviewees. The HSIRB found that the following study met the requirements to proceed with the study. The investigator started the data collection after receiving approval.

The data collection phase included the interviews of 20 police officials chosen to be interviewed by their respective agency Department Head/Designee. The investigator contacted the Department Head/Designee for research approval and assignment of a representative that could represent the agency concerning matters about police responses to active shooter incidents. The analysis phase included the letter and telephone notification of 24 police agencies in the Michigan counties of Clinton, Eaton, and Ingham. The police agencies were marked anonymously, and confidentiality of the participant interviews was further maintained. Department Heads and/or Designees were provided with the informed consent document of this study. The informed consent documents were signed and the study progressed to the recorded interviews of the participants.

This investigator had no restrictions on the policing ranks of the interviewees. The only requirement was that the Designee be a police employee at the respective agency. Many Department Heads and/or Designees insisted that they themselves represent their agencies as the person interviewed for this study. The investigator allowed the Department Heads/Designees the decision-making ability to either assign another police employee or for themselves to be interviewed. An introduction letter and study purpose letter were sent to the sampled criterion (refer to Appendix A). In addition, the investigator called police agency Department Heads/Designees via telephone to request study participation.

The interview questions were open-ended to facilitate participant communications, which are best facilitated by the grounded theory model (refer to Appendix B for interview questions). Each interview took approximately 40 minutes of

time to complete. The study consisted of interviews with departmentally chosen police personnel that are responsible for training, policies, and collaborations relative to active shooter incident response and training. Before contacting anyone from the sampled 24 police agencies, the investigator contacted each Police Department Head/Designee of the 24 sampled police agencies. The investigator interviewed those police personnel chosen by the agency's departmental leader/designee.

The sampled population of interviewees included those persons who are actively involved with active shooter policy making and training related to active shooter preparedness. Key persons to be interviewed included the police chief and/or executive designee, and firearm and/or active shooter training instructors. The related interviews engaged active interviewing defined by Gubrium and Holstein (2003) as where the interviewer provokes the interviewees' responses by indicating resources, training positions, and precedents to motivate the interviewees' responses. The study further included the collection of written documentation. The document analysis included the review of training documents, policies, procedures, mutual aid agreements, and related agency active shooter documentation.

In addition, actual active shooter training sessions were viewed among the sampled police agencies. The data collection of the training included written notes (memoing). During the observation of the training sessions, the researcher did not actively participate in the training, but monitored the training written materials and the interaction of the training participants and the instructors. The documentation of the training included the researcher arriving on site before the start of the instruction. The

researcher wore civilian attire and sat in the rear of the classroom. The instructors introduced the researcher and provided a brief explanation of the study.

The researcher maintained a note pad and examined the interaction of the training participants and the ability of the instructors to communicate the established training content. The researcher maintained some notes of the experience and further summarized any issues relative to the research questions. The researcher monitored the scenario-based training, making a point not to interfere with the instruction. Examinations of the training sessions were a critical piece of this study, and the researcher remained objective during the observations. All respective notes, transcripts, and audio interviews will be maintained on a hard drive in a locked cabinet at the dissertation chair's office for no less than three years.

Analysis and Interpretation

The framework of a grounded theory study is based on the notion that the researcher is to explain the phenomenon through found data points. First and foremost, the researcher is a fact finder that critically monitored the data collection stage for the purpose of remaining objective. Glaser (1992) stated that "it is important to understand grounded theory as a package of research methods, which includes data collection, coding and analyzing through memoing, theoretical sampling and sorting to writing, using the constant comparative method" (p. 12). Theoretical sampling is a critical piece of grounded theory and is defined as "the process of the data collection for generating theory whereby an analyst jointly collects, codes, analyses his data and decides what data to collect next and where to find them, in order to develop his theory as it emerges"

(Glaser & Strauss, 1967, p.45). The concept of memoing is further defined as the writing of ideas during the coding process (Glaser, 1978). However, the caution for grounded theory is that it is concerned with explanation of the phenomenon and not necessarily how the phenomenon should behave (Creswell, 2007). The analysis of this study included comparison of notes to policies and observed training sessions.

The gathering of in-depth and rich data is essential for the formulation of the grounded theory model. The steps of the analysis phase include the organization of the active shooter data into a state of preparation (Creswell, 2007) with the aid of qualitative data management software. The next data points are based on the active interview process in which the participants will have their questions digitally recorded and transcribed specifically to be used during the examination and coding phases. Before the coding phase was initiated, the researcher thoroughly examined the transcribed interviews and the notes of the observation of key phrases or words from each interview (Charmaz, 2008). Creswell (2007) stated that it is best to obtain a general sense of the meaning of the data. In addition, the written documentation was organized in a fashion that examined police policies, protocols, and mandates relative to police responses to active shooter incidents. Essentially, the researcher delved into the data for a rich analysis through constant notes and general idea development.

The next phase of the analysis process emphasized proper coding processes. Strauss and Corbin (1990) stressed that there are three types of coding when using grounded theory, including open coding, axial coding, and selective coding. The study prescribed to the concept of open coding throughout this project. Strauss and Corbin (1990) define open coding as "the process of breaking down, examining, comparing,

conceptualizing and categorizing data" (p. 61). The rudiments of open coding are based on a predicate called the concept-indicator model (Glaser, 1978).

Strauss and Corbin (1990) articulated that key terms associated with open coding include (1) conceptual labels provided about specific occurrences observed; (2) properties that characterize or identify a category of events; (3) dimensions of time in which specific properties are related to the event; (4) dimensionalization defined as the ability to reduce a property to its lowest element regarding the phenomenon; and (5) categorizing, which is the processing of how concepts are defined or classified on how they relate to each other.

The purpose of this research project was to examine police active shooter preparedness. This study used a content analysis strategy, which was developed to examine the sampling from words, phrases, sentences, themes, or ideological stances (Berg, 2004). The content analysis strategy identified what is called a sentence theme that is defined as a string of words with an identifiable subject pattern (Berg, 2004). Theme data may be assessed in a manner that forms a consistent category, which will then be organized in a matrix of categories (Miles & Huberman, 1994). This investigator categorized the themes in a constructed matrix consisting of the data collection sets, including written documentation, active interview responses, and observed training.

The coding phase consisted of analytical processes that involved the making of comparisons and asking questions and, finally, the conceptualization of the data (Strauss & Corbin, 1990). The following process allowed inquiry of the comparisons and then conceptualization of the phenomenon. The developed theory further proceeded to a validation sequence, with which the researcher will validate the theory against the data points.

Researcher's Role

Qualitative research is based on interpretative research in which the researcher engages the study participants in a sustained and intensive manner (Creswell, 2007). It is through this relationship that researchers must elaborate on their biases, values, and personal interests relating to the project at hand (Cresswell, 2007).

My background includes 17 years of experience as a police official, holding a present rank of Police Captain. In addition, I am a Naval Reserve Officer who understands precisely that his military and policing experiences may have an effect on this project. I articulate that my experiences and position assisted throughout navigation of the data collection phase.

The development of the study was based on biases developed over a lifetime that served not to taint this investigation but to substantiate its objectivity. The tragic thought of a perpetrator shooting innocent persons is the impetus for this research. The investigator is truly concerned about the effect active shooter incidents have on our society. With that said, I remained objective throughout the investigation process.

Validity and Reliability

The validation of a project's findings articulates the strength of the research and further assesses its accuracy from the perspective of the researcher, participants, and readers (Creswell & Miller, 2000). In the building of qualitative validity, there should be an array of rich and descriptive data used in a manner that allows future researchers to build further understanding and comparison models (Creswell, 2003).

With the aforementioned guidelines, I provided the participant police agencies a final report detailing the findings and specific themes of the captured data. This member-checking assisted in the validation of the participants' assessment of what they articulated during the open-ended interviews. I used multiple written and verbal interview streams of information, which were used to build a series of coherent and justifiable themes. The research questions of this study analyzed what methods police agencies in three Michigan counties engage when preparing for active shooter incidents.

In validating a grounded theory project, Strauss and Corbin (1990) suggested that the adequacy of the research process itself and the grounding of the findings are vital. The following criteria by Strauss and Corbin (1990) were used to validate the quality of a grounded theory model:

1. Are concepts actually generated?
2. Is there a systematic connection between the concepts?
3. Are there multiple conceptual linkages and associated categories?
4. Is there a system of variation developed in the theory?
5. Are broader conditions within the phenomena that are built into the study's explanation?
6. Has the process been fully engaged?
7. Are the theoretical findings viewed as significant? (pp. 254-256)

Based on the aforementioned guidelines, I ensured the following specifics regarding the elements of quality and trustworthiness of this grounded theory research:

1. All collected data during the interview process will be validated for consistency within the literature review. Moreover, all investigator biases will be brought in alignment for study objectivity.
2. I seek to use the police agency as a mechanism by which to gain multiple streams of data during the interviews.
3. The data will allow for the construction of the necessary analytical categories.
4. The data will allow for the development of grounded theory and a normative model.

I fully answered each of the research questions, which demonstrated differences amongst the departments. It is through this variability that the research ensured its validity and trustworthiness.

Ethical Considerations

The Western Michigan University Board of Trustees requires that before the onset of a requested study there is a review by the Human Subjects Institutional Review Board (HSIRB). The study started after receiving approval by the HSIRB board on June 4, 2013. Verification of HSIRB approval is included in Appendix E. In addition, the issue of confidentiality was a significant concern. As a result, each participant was provided the rationale and results of the study. During all phases of the research project, confidentiality of the participants was respected in a sensitive manner. All digital recordings of the interviews will be maintained on a hard drive for three years in a locked cabinet at the researcher's home. After three years, the hard drive will be destroyed. In

addition, all transcriptions and related notes will be maintained on this hard drive and further destroyed after three years.

A summary of the interviews was sent to the respective participants to assure accuracy in their wording. Upon the closing of all interviews, there was a debriefing concerning the investigator's responsibilities concerning protection of the participant's confidentiality. Finally, at the close of this research project, the investigator disseminated a copy of the dissertation to the participants to be used for operational and tactical knowledge advances.

Development of Normative Model

The purpose of this study was to create a normative model for police active shooter preparedness. The methodology of grounded theory allowed for actual, real-world observations of police active shooter preparedness. Grounded theory assisted with the development of the normative model. This normative model should benefit the following stakeholders: responding police officers, police trainers, public policy makers, businesses, schools, community members, and other entities concerned with public safety. The creation of a normative model for police response to active shooter incidents is based on the desire for governmental agencies to analyze current preparedness efforts. Thacher (2006) argued that normative case studies assist in our understanding of public values related to our ideas and obligations. For example, what services should a city provide to its constituents (Jacobs, 1961)?

Thacher (2006) articulated that normative case studies assist policy makers in determining governmental action by establishing related criteria for responses to public

issues. This normative model is based on the data collection points of this study. The normative model cultivated new themes that contribute to the field of public policy by recommending new and leading practices for proposed policy changes and procedures. The following normative model should be used to understand and correct deficiencies in police active shooter preparedness. This normative model is followed by a prescriptive model. A prescriptive model should address any gaps or deficiencies uncovered by examination of the normative model. The prescriptive model for active shooter preparedness is a holistic approach that examines active shooter preparedness from various disciplines and formulates a comprehensive model that engages prevention and response.

CHAPTER IV

ANALYSIS

The analysis examined the active shooter preparedness of 20 police agencies in the mid-Michigan area. The first step of the analysis was to complete face-to-face interviews of the 20 sampled police agency representatives. The representatives and police agencies were identified by anonymous markings. Table 1, Agency Participation, displays the range of sworn officers, number of agencies requested to participate, agency type, and population ranges of the jurisdictions. The analysis then included a document analysis of written documentation and observations of police active shooter training (see Table 2).

The analysis showed that most police agencies engage a police-centric approach relating to their active shooter preparedness. The results indicate that police agencies focus most of their active shooter preparedness resources on reactive police response tactical objectives. The analysis also showed that police agencies have limited active shooter preparedness collaborative networks with other police agencies and even less with non-police entities, including fire, EMS, hospitals, businesses, and citizens.

Study Participation

All study participants were selected in accordance with approved HSIRB protocol (see Appendix B) and held one of the following ranked positions: chief, captain, lieutenant, sergeant, or detective. Moreover, the participants were all actively involved in

the active shooter policy making and training in their respective departments. A total of 20 police agencies participated in this study. Only one female participant was surveyed, and all but one of the interviewees held a supervisory rank, with the exception of one detective.

Table 1

Agency Participation

Participation Factor	Number
Requested agency participation	24
Actual participation	20
County agencies	3
City or township agencies	15
University agencies	2
Agencies with populations over 70,000	3
Agencies with populations 30,000–60,000	3
Agencies with populations less than 30,000	14
Agencies with over 100 sworn officers	1
Agencies with over 40 sworn officers	6
Agencies with less than 40 sworn officers	14

All of the interviews were digitally recorded and transcribed by a professional transcriptionist. The participants were provided an opportunity to review the transcripts before final submission of the data collection. The transcriptions were formatted and downloaded for qualitative document analysis. All of the police agencies that had written policies allowed for visual inspection but directed that no specific active shooter tactics

and formations were to be released. Four of the police agencies allowed written documents to be taken out of the agency buildings but asked that the principal investigator maintain their confidentiality by shredding the documents after having analyzed them.

Table 2, Agency Written Policy, indicates that a total of three counties, two universities, and 15 municipal police agency types participated in this study analysis. The table also shows that that 55% of the 20 surveyed police agencies had written active shooter incident policies. Nine agencies failed to have written policies, including one university, one county, and seven municipal agencies. Of the nine police agencies without written active shooter policies, two agencies indicated that they were in the process of creating such a policy. Of the seven municipal police agencies without a written policy, only one had a population over 40,000, and this agency was in the process of creating a written active shooter policy at the time of the interview.

The principal investigator observed active shooter incident training while it was in session (see Table 2). Observation of the training sessions included an examination of the training curricula for strategic and tactical objectives. The training revealed exactly what police officers are taught relative to their response to active shooter incidents. Observation of the training advanced the research project by providing a different view of the preparedness cycle. The training demonstrated how officers were directed to behave in an actual active shooter incident. The training observations heightened the analysis by exhibiting what aspects of the training are considered important. The training either validated or invalidated what was communicated in the interviews and written

documentation. Observation of the training provided a practical dimension concerning active shooter preparedness.

Table 2

Agency Written Policy

Agency #	Agency Type	Interview	Written Policy	Training Observed	Population over 40,000
1	Municipal	Yes	No	No	No
2 *	Municipal	Yes	Yes	Yes	No
3	County	Yes	Yes	No	Yes
4 *	Municipal	Yes	No	No	No
5	Municipal	Yes	Share County	No	No
6	County	Yes	No	No	No
7	Municipal	Yes	No	No	No
8 *	Municipal	Yes	Yes	Yes	Yes
9	Municipal	Yes	Share County	No	No
10 *	County	Yes	Yes	Yes	Yes
11	Municipal	Yes	No	Yes	No
12	University	Yes	No	Yes	No
13	Municipal	Yes	No	Yes	No
14 *	Municipal	Yes	Yes	Yes	Yes
15	Municipal	Yes	No	Yes	Yes
16 *	University	Yes	Yes	Yes	Yes
17	Municipal	Yes	Share County	No	No
18	Municipal	Yes	Share County	No	No
19 *	Municipal	Yes	No	No	No
20 *	Municipal	Yes	Yes	Yes	No

Note. Share county is defined as municipal agencies that use a county active shooter policy.

*Agencies that participated in the multiple agency training.

The collection phase demonstrated data triangulation for six cases. These six cases included interviews, written policies, and training sessions that were fully observed for each of the six police agencies (see Table 3, Triangulation Matrix). Active shooter training curriculum was observed for all six of these cases. The six triangulated cases incorporated one county, one university, and four municipal police agencies. Four of the six cases had populations over 40,000 and included one county, two municipalities, and one university police agency. The six cases included agencies from all three counties surveyed.

Table 3

Triangulation Matrix

Agency #	Agency Type	Interview	Written Policy	Training Observed	Population over 40,000
2	Municipal	Yes	Yes	Yes	No
8	Municipal	Yes	Yes	Yes	Yes
10	County	Yes	Yes	Yes	Yes
14	Municipal	Yes	Yes	Yes	Yes
16	University	Yes	Yes	Yes	Yes
20	Municipal	Yes	Yes	Yes	No

Note. Agencies in which interviews, written policy, and training were observed.

Analysis of Written Documentation

The analysis of the written documentation was instrumental in this study and allowed for additional validation relating to the data collection. The written

documentation intensified the understanding of the surveyed police agencies' active shooter preparedness curriculum. Written documentation and training observations complemented the perspective of the police interviews and provided clarification of the agencies' direct guidelines to its police employees. In essence, the written documentation represented a vital data point to further support themes about overall agency active shooter preparedness. The written documentation provided another dimension with which to understand and draw conclusions about active shooter preparedness.

The written documentation included the observation of policies, procedures, training curricula, mission statements, and general mutual aid agreements from police agencies. The principal investigator obtained the documents and was given opportunity to read the documents and take notes on points of interest relative to the research questions. The written documentation was compared with information obtained from the interviews and training observations. The written documentation provided an opportunity to illustrate consistency or variation concerning the data.

Research Questions Answered

The research questions were answered by analysis of the 20 interviews and observation of the written documentation and training sessions. Each research question was answered and supported by the literature review. Similarity of the interviews, written documentation and observed training responses produced a formulated normative model.

General Research Question

How do police departments in three Michigan counties prepare for responses to active shooter incidents?

Overwhelmingly, police agencies demonstrated that preparedness for active shooter incidents was based primarily on reactive tactical response efforts, which include limited preparedness regarding medical treatment for wounded citizens, threat assessment systems, media relations, citizen notification systems, and post management of the active shooter incident. The analysis identified some loosely connected collaborative police networks implemented for the purpose of addressing tactical and operational limitations during major incidents, such as active shooter incidents.

Forty percent of the surveyed agencies maintained that they practice threat assessment techniques, although there was no written documentation to validate its existence. Notably, it was only the two university police agencies that engaged the notion of active shooter prevention through threat assessment protocols. Both university police agencies provided multiple communication channels relative to social media and cellular lines to warn citizens of an active shooter incident or other major crisis. In addition, the university police agencies were far more inclined to train citizens and students about the warning behaviors of an active shooter. Only two non-university police agencies demonstrated dedicated resources for training citizens on how to mitigate injury during active shooter incidents. One county police agency does train some of its non-sworn personnel in techniques to minimize their injury during an active shooter incident.

DeLone (2009) stated that collaboration often exists because of political stimulus and, as a result, agencies form loosely coupled systems of collaboration. The principal investigator observed from the interviews that there was a belief that police agencies should support the idea of regionalism when engaging preparedness for major incidents. Observation of eight general mutual aid agreements supports the notion that police agency collaboration with other agencies is based on formulating resource streams to address situations beyond normal tactical and operational capacities. The sharing of specialized services, such as canine resources, crime scene investigation, and SWAT, is a common form of police collaboration. The study didn't uncover any recent collaborations specific to active shooter preparedness planning. However, there was a demonstrated collaboration of police agencies from all three counties that produced a 2009 active shooter training curriculum. However, one of the three county agencies currently did not collaborate within the tri-county active shooter training consortium at the time of this study.

The study supported that police agencies with fewer than 40 sworn officers often collaborate with police agencies with over 40 sworn officers and county police agencies to address operational and tactical capability limitations. Agencies with fewer than 40 sworn officers look toward county police agencies for guidance in development of active shooter response tactics and policies. However, 55% of the police agencies failed to include fire and EMS in their active shooter collaborative planning and training sessions. The police agency with over 100 sworn officers has an emergency management department that facilitates planning for major disasters. The emergency management department within this municipality assists with the formulation of collaboration between

police and fire. This municipality was also working on a policy change to include casualty collection points with fire and EMS in order to reduce the time that victims would wait to receive medical treatment during an active shooter incident. In this scenario, police would assist with security as fire personnel enter the active shooter threat area to provide medical treatment. The notion of engaging collaborative planning between police and fire was demonstrated as weak when examining the following questions: How can first responders increase their medical response times, can police and fire establish radio interoperability, when will non-police first responders enter a threat area, and how can non-police first responders assist with breaching doors and providing emergency medical training to police agencies?

The study did not include the observation of a large-scale scenario, which may provide a better understanding of the relationship between police and fire departments during active shooter incidents. No large-scale scenarios occurred during the data collection period. However, it was clear from observation of the training sessions that police officers were concerned with the fire and EMS response. In one training session, police officers voiced that there were limited training resources focused on the concept of increasing medical response times for wounded citizens and first responders.

The following themes were developed:

Theme 1: Police agencies do not engage active shooter prevention or preemption protocols.

Theme 2: Police lack an understanding of threat assessment protocols and do not view them as a beneficial segment of active shooter preparedness.

Theme 3: Police agencies verbalize strategic objectives but fail to demonstrate written documentation supporting those objectives.

Theme 4: Police agency collaboration is often spearheaded by county police agencies regarding active shooter policies and training.

Theme 5: Police agencies with fewer than 40 sworn officers tend to collaborate more with county police agencies to address active shooter preparedness than agencies with more than 40 sworn officers

Theme 6: Police argue that police budgetary resources concerning active shooter preparedness should be increased.

Theme 7: Police assess that scenario-based training is extremely beneficial.

Theme 8: Police indicate that more multi-agency active shooter training is needed.

Theme 9: For security reasons, police support first responders from the fire department entering the threat area when assisted by police.

Specific Research Questions

In this chapter, I first list the specific research questions and then provide overall findings for each. The research findings then progress to a more detailed analysis of each question. The specific research questions are stated first:

Specific Research Questions:

1. Do police agencies develop strategic and tactical objectives as policies that guide their active shooter incident responses? Is there written documentation of those objectives? Are the strategic and tactical documents linked? Are those objectives and their documents communicated to police personnel?

2. Are the strategic and tactical objectives integrated with training for active shooter incident response? How is that done? What is the nature and scope of the tactical training for active shooter incident response?
3. How do police agencies utilize technology to enhance response to active shooter incidents? How is technology used for training? How is it linked to active shooter incident strategic and tactical objectives? How is technology used in actual active shooter incident response?
4. Do police agencies collaborate with each other in responding to active shooter incidents? Do they collaborate in strategic policy planning, tactical planning, communications, and technology, etc.? If they do, how is this done? If they do not collaborate, why not?

Overall Findings of Specific Research Questions

Police agencies do not develop strategic objectives as policies that guide their active shooter preparedness; they develop tactical objectives as policies that guide their responses to active shooter incidents. Fifty-five percent of the police agencies have written documentation of tactical objectives but no written documentation concerning strategic objectives. The results of the interviews suggest that police agencies have strategic objectives, but this is not supported by written documentation. Strategic and tactical documents do not appear to be linked when examining supporting written documentation. The interviews indicate that strategic objectives are linked in police agency philosophy and training and in agency goals to have common standards with surrounding police agencies. Tactical objectives were communicated to police personnel

mainly through active shooter training and policy. Strategic objectives were not communicated to police personnel in the form of training or written documentation.

The interviews show that tactical objectives are integrated within training systems. Observation of related training curricula and actual trainings in session do not support strategic objectives being linked in active shooter response training. Active shooter response training focused primarily on tactical objectives. The nature and scope of tactical training for active shooter incident response is scenario-based with a brief historical analysis of previous incidents.

Technology increases officer safety by providing increased levels of protective gear and weaponry and increasing response times relating to quicker neutralization of the threat. Technology is used in training to create more realistic scenarios when training police officers. Technology was found to be linked to tactical objectives but not strategic objectives. Technology is used in an actual active shooter response to gain visual observation of the threat area, provide keyless entry into schools, increase officer safety with advanced armor and rifles, and send citizen notifications.

Police agencies collaborate with other agencies in responding to active shooter incidents. Police agencies do not typically collaborate in strategic policy planning, tactical planning, communications, and technology relative to active shooter incidents. The stimulus for collaboration is largely to address tactical or operational limitations. Collaboration is further motivated by multi-agency grants. Collaboration is often not engaged by departments with more than 40 sworn officers because they feel more confident to control tactical responses and related training protocols.

Research Question 1

Ninety percent of the police agency interviewees reported that they have strategic objectives relative to active shooter preparedness. Table 4, Analysis of Research Question 1, illustrates interview data that support the notion that police agencies establish strategic objectives relative to their active shooter preparedness. However, none of the written documentation supported the notion that strategic objectives existed for police active shooter preparedness. Observation of the training sessions and curriculum does not support the notion that police agencies have strategic objectives relative to active shooter preparedness. Analysis of 12 police agencies' mission and value statements further failed to support the existence of strategic objectives relative to active shooter preparedness.

The following responses best articulate the interviewees' responses concerning strategic objectives:

Respondent 13 stated the following:

> We, we just are trying to stay trained and cooperatively work with the agencies around us that we're going to be working with on that kind of situation, so…and I can't say that this department actually has any big plans for…other than staying trained. (Personal communication, July 11, 2013)

Respondent 14 stated the following:

> Our long-term goal is to make sure everybody on our department is trained the same and to have a core of the same tactics in all of the tri-county area. Several years ago we had put together a training consortium, if you will, where we got all the trainers from the different agencies and trained the same class and then they go out and train their agencies to those same tactics and standards, so if we need to call upon another neighboring agency, they're trained the same that we are and vice-versa. And we can…the tactics itself isn't that complicated as far as the way that you enter the building, so it's something that you can plug any officer into as

long as they're trained the same from different agencies. (Personal communication, July 13, 2013)

Table 4

Analysis of Research Question 1

Agency #	Strategic Objectives	Modality Strategic	Tactical Objectives	Modality Tactical	Linked Together
1	Training & response	Oral	Mitigate injury & death	Oral	Philosophy & training
2	Equip & train	Oral	Mitigate injury & death	Written	Philosophy & training
3	Stay trained	Oral	Mitigate injury & death	Written	Philosophy & training
4	Equip & train	Oral	Mitigate injury & death	Oral	Philosophy & training
5	Common response	Oral	Mitigate injury & death	Written	Philosophy & training
6	Stay trained	Oral	Mitigate injury & death	Oral	Philosophy & training
7	Prevention	Oral	Mitigate injury & death	Oral	Philosophy & training
8	Common response	Oral	Mitigate injury & death	Written	Philosophy & training
9	Public safety & notifications	Oral	Mitigate injury & death	Written	Philosophy & training
10	Common response	Oral	Mitigate injury & death	Written	Philosophy & training
11	None	Oral	Mitigate injury & death	Oral	No
12	Public safety	Oral	Mitigate injury & death	Oral	Philosophy & training
13	Stay trained	Oral	Mitigate injury & death	Oral	Philosophy & training
14	Common response	Oral	Mitigate injury & death	Written	Common standards

Table 4—Continued

Agency #	Strategic Objectives	Modality Strategic	Tactical Objectives	Modality Tactical	Linked Together
15	Public safety & notifications	Oral	Mitigate injury & death	Oral	Common standards
16	Public safety & notifications	Oral	Mitigate injury & death	Written	Common standards
17	None	Oral	Mitigate injury & death	Written	Common standards
18	Equip & train	Oral	Mitigate injury & death	Written	Common standards
19	Stay trained	Oral	Mitigate injury & death	Oral	Philosophy & training
20	Equip & train	Oral	Mitigate injury & death	Written	Common standards

Note. Oral policies were obtained from interviews.

Analysis Details for Research Question 1

Twenty percent of the police agencies maintained that their strategic objectives were to equip their personnel with the knowledge to effectively respond to an active shooter incident. One agency reported that its strategic objective was prevention of an active shooter incident. However, this agency failed to demonstrate a threat assessment protocol or other written documentation to support this ideal. Four agencies revealed that their strategic objectives are to maintain a common active shooter response with other agencies. Active shooter training developed by a collaboration of multiple agencies demonstrated that one of the county agencies no longer participated with this multi-agency initiative. Explanation as to why the county agency no longer participated is unknown.

Interview data concluded that all 20 police agencies have established tactical objectives. However, 45% of the police agencies did not have written policies to support these objectives. All 20 police agencies reported that their tactical objective was to mitigate injury and death. The notion of immediate intervention and neutralization of the threat was apparent in all interviews, written policies, and observed training. Sixty-five percent of the interviews revealed that strategic objectives were linked with their overall departmental philosophy and training, whereas 30% of the police agencies said that their strategic and tactical objectives were linked as a result of their standardization of common tactical responses with area police agencies.

The strategic objectives were not communicated to police officers during the observed active shooter training sessions or through written documentation. Police officers in training sessions clearly articulated tactical objectives. Sixty-five percent of the police agencies without written active shooter policies revealed that their active shooter responses were covered in their use-of-force policies. Three of the interviewed police chiefs indicated that their police officers received practical training regarding their strategic and tactical objectives.

Seventy-seven percent of the police agencies that did not have written objectives had fewer than 40 sworn officers. The majority of the police agencies with fewer than 40 sworn officers seemed to use the policies and procedures created and designed by their respective county police agency. The county agencies were observed as the lead organizations for the creation and implementation of active shooter policies. Police agencies with fewer than 40 sworn officers tend to collaborate with county agencies for active shooter response training. Those agencies that had written documentation for

responses to active shooter incidents included a short paragraph on the use-of-force laws and stated that the tactical objective was to stop the threat as soon as possible. Five police agencies reported that they were in the process of changing their policies and procedures to reflect that there was no set number of police responders needed to engage an active shooter. These five police agencies also stated that they have already implemented tactical training changes to reflect single-person entries into an active shooter incident.

Written documentation at 11 of the police agencies (55%) was reviewed. The majority of this documentation focused on reactionary tactical objectives and lacked clarification concerning proactive objectives. One university had written documentation that addressed citizen warning notification systems during an incident and even included active shooter awareness trainings for citizens. One county and five municipal agencies used the same active shooter policy. These six agencies reported that they collaborated on policy building, training, radio communications, and equipment relative to active shooter preparedness. It was clear when analyzing this group of police agencies that the county agency was the chief partner for resources, training, and active shooter preparedness planning amongst their smaller municipal counterparts, which all had populations less than 40,000. Moreover, the data results demonstrated that police agencies with fewer than 40,000 people were more likely to engage in collaborations related to active shooter response planning, training, and policy development with their respective county agency.

As stated above, the study analyzed policies and procedures from 11 police agencies, of which five policies were different. When exploring the policies, it was

found that four used the term *active violence incident* as synonymous with active shooter incident. These agencies further encompassed the notion that active shooters used a myriad of violence to include the use of firearms, knives, bodily harm, and bombs when committing acts of mass violence. Inspection of the written policies suggest that policies are not updated regularly, as only three of the policies had been updated post 2010.

Research Question 2

Sixty-five percent of the police agency interviewees reported that their strategic and tactical objectives were integrated in their training. Responses during the interviews suggested that the strategic and tactical objectives are integrated largely by the agencies' philosophy and training. Analysis of the training documentation and related policies supports the notion that strategic objectives are not communicated to police personnel. In addition, observation of the training revealed an agency focal point on tactical responses and provided no articulation of strategic objectives. Statements from police chiefs, captains, and lieutenants stated that their employees understood the agency's strategic objectives as a result of police agency philosophy and training. It is not clear why active shooter preparedness strategic objectives are not written or directly communicated to personnel.

The nature and scope of the tactical training for active shooter incident response is that of a scenario-based learning system. The active shooter tactical training of all reported agencies consisted of at least 16 hours of active shooter training. Written documentation at one university police agency mandated annual active shooter training in its policy. However, none of the other agencies maintained a mandated amount of active

shooter training. The scenario-based training included the use of realistic weaponry to enhance the experience. Participants in the training were exposed to reality-based training in which they performed on teams with police officers from other agencies. The participants trained in full uniform and were expected to behave according to learned tactics.

Analysis Details for Research Question 2

Analysis of the interviews showed that police agencies believe that they integrate their strategic and tactical objectives with training and philosophy. However, written documentation of the six triangulated cases suggests that integration focuses primarily on tactical objectives with limited to no attention placed on strategic objectives. The principal investigator observed training of one multiple-agency training and two sessions of one municipality. The principal investigator observed two active shooter training curricula. The multiple-agency training sessions encompassed a total of eight different police departments (one county and seven municipalities). In addition, the multiple-agency training sessions consisted of police agencies from all three surveyed counties. The primary investigator did not communicate with the participants of the training sessions and only observed their actions. The training clearly defined the tactical objectives but failed to demonstrate any clarification of strategic objectives for active shooter preparedness.

The nature and scope of the active shooter tactical training encompassed classroom instruction, scenario participation, and instructional briefings. All of the observed training sessions provided a definition for the term *active shooter* and

distinguished this concept from a hostage incident. There was explanation and documentation to support how officers should prioritize the rescue of those involved in an accident shooter incident: Civilians were prioritized as deserving of the highest level of protection, followed by first responders and a moral obligation to assist the suspect and property being prioritized last. The trainings provided a historical analysis of major active shooter incidents. The trainers were predominantly active police officers with SWAT experience. Each of the sessions provided a video of either the Columbine High School shooting or the Beslan, Russia massacre. The videos provided an emotional impetus for the officers to actively engage in the training. The Columbine High School shooting was instrumental in changing police active shooter tactics. The idea that police officers needed to immediately move toward the threat area is an entrenched active shooter training concept.

Each of the training sessions provided objectives as to how police officers on the scene of an active shooter incident should address wounded individuals during an active shooter incident. The trainings demonstrate that police officers must expeditiously move to the threat area while purportedly walking past the wounded when an active threat exists. None of the trainings provided any emergency medical treatment instruction to address the wounded. In addition, none of the training sessions provided for any joint training with emergency medical first responders. However, all of the trainings demonstrated the need for police officers to be courageous. During the training, several of the instructors assured the participants that in an actual active shooter incident, it would be emotionally difficult to walk past wounded individuals.

The training progressed to the notion of increased speed in confronting the threat while monitoring movements and directing innocent people to safety. The training suggests that police officers must immediately confront the shooter(s) in their response to active shooter incidents. However, the trainers advocated that police officers are always on duty and that there is a duty to be ready for an active shooter incident. Police instructors emphasized a mental toughness that police officers must acquire when approaching an active shooter incident. The training was geared toward a police-centric perspective that focuses on approaching the shooter and immediately stopping the threat.

The active shooter incident training consisted of scenarios in which the county police agency used a school building as the training site and the municipal agency used a school and an urban building. Simunition Training is a reality-based system that simulates the shooting of a real gun and delivers a mark on the targets that are hit. The study found that Simunition Training is the preferred technology for active shooter incident training. However, many of the surveyed police agencies argued that Simunition Training is far too expensive. All of the observed training presented information to recognize improvised explosive devices. The explosive device training suggested that the threat of an explosive device is always present during a response to an active shooter incident. Instructors at one agency indicated that an explosive device has a psychological and physiological effect of which the responding police officer should be aware. This police agency also used a recording device during the scenarios to simulate bomb explosions and screaming of the wounded.

The training participants were directed to wear all of their uniformed gear and were provided with head, face, and neck protection. Before the scenario-based training,

all of the participants and instructors were physically checked for live weapons and ammunition. The participants were then provided the training equipment and instructed to behave in a safe and professional manner. The scenarios engaged the participant's ability to move toward the threat while being engaged by a host of actors, navigating explosive devices and contacting other actors that were playing the part of innocent citizens and the accused shooter(s). The training participants were instructed to handle the scenario as it were real and to behave according to their use-of-force policies and the prescribed learned tactics.

One of the training sessions provided training on breaching doors. There was a description of requisite tools that are used for breaching, and the act was demonstrated by a member of a local SWAT team. Many of the officers stated that they had access to breaching tools in their patrol vehicles but went on to say that they needed more extensive training on their use. One of the instructors suggested that the training participants should contact their local fire departments, stating that firemen are the true experts of breaching doors and should be contacted for additional resources. The topic of breaching brought up a classroom discussion of the Sandy Hook active shooter incident, and one participant stated that schools in his jurisdiction now lock all doors at the commencement of school. This officer went on to say that this complicates and slows responses when proceeding to the threat area. One of the trainees informed the training participants that they had established a master key system with one of their local schools in which the keys are kept in the patrol vehicles. This police officer stated that gaining access to a locked school was a major problem until the school district funded the development of a master key system.

Only two training curricula were analyzed during this study. The curricula stressed the notion of a rapid deployment of tactical objectives. Both curricula advocated that active shooter incidents occur in a host of locations, not just schools. Each of the curricula started their training sessions with a historical description of previous active shooter incidents. One training curriculum presented a PowerPoint slide explaining a theory of active shooter warning behaviors that are consistent with the research, planning, preparation, and attack of an active shooter (Calhoun & Weston, 2003). This brief presentation of threat assessment protocol was not a focal point in the training. However, both training curricula provided lists of common characteristics of past active shooters and articulated the need to neutralize the threat immediately as a way to mitigate injuries and death.

The written training curriculum data focused on a variety of active shooter tactics to safely approach the accused and stop the threat. Only one of the curricula articulated the notion of delivering medical treatment to victims. Nevertheless, both curricula note that medical treatment commences only after the threat has been neutralized. In fact, the training curricula demonstrate that police officers must move past the injured in their pursuit of the accused. One of the police departments with a population over 40,000 was in the process of collaborating with area fire departments to create a system of mass-casualty collection checkpoints whereby police establish safe areas where fire and EMS personnel may safely enter and treat wounded persons while the active threat still existed.

Both training curricula stress that once the incident is stabilized, officers should proceed to escort people from the scene. Management of the active shooter incident is addressed with communication to the incident commander (highest ranking supervisor on

scene that manages the incident). The incident commander handles the post-incident scene while addressing site security and evacuation of citizens. Both curricula provide limited instruction relating to post-scene management. Neither curriculum provided any of the following post-scene management training: crime scene management, media relations, communications with victims, processing large amounts of evidence, and death notifications. Furthermore, the curricula did not provide information about federal agency collaboration and/or an explanation of their resources.

One of the training sessions included a video recording of the scenarios. As a result, participants were provided with an immediate debrief with video of their training actions. The video recording of the scenario provided the ability of the instructors to expand on some common mistakes. The video recording was well received by the training participants. Several of the trainees were heard making positive comments about the video recordings.

Each of the training sessions commenced with a PowerPoint teaching instruction based on the historical development of active shooter incidents. The instructors were adamant that the training was important and that the scenario-based portion of the training was the focal point of the training. The training instructors placed a heightened sense of personal duty relating to the rapid response of active shooter tactics. A sense of personal sacrifice while performing the duties of a police officer was strongly verbalized by the instructors. An analysis of previous active shooter incidents, such as Columbine, seemed to hold the attention of the training participants. The principal investigator heard one training participant call the Columbine High School killers “animals.” The principal

investigator also noted that many participants were visibly shaken after having viewed the Columbine High School video footage.

There was very limited coverage of threat assessment protocols and warning behaviors associated with active shooters. It appeared from the training that prevention of active shooter incidents was not a focal point in either training curricula. Only one of the agencies discussed the concept of an active shooter threat assessment. The concept of threat assessment was discussed in a manner that provided an informal definition only and failed to demonstrate a systematic protocol.

The training sessions progressed quickly into instruction about the scenarios and tactical training. The participants were taught a host of tactics to minimize their tactical positions when moving toward the active shooter threat. The active shooter incident tactics focused on the speed of stealth movement while rapidly approaching and neutralizing the active shooter(s). The tactics of team movement engaged the same concept and consisted of simple and clear communications by the team leader. The deliverance of deadly force was communicated through the training sessions, and officers were encouraged to practice the tactics regularly. There was a notion of active shooter single-man entries of which instructors communicated some core concepts and principles. The training demonstrated that police officer discretion is engaged when entering a threat area.

The instruction of the core principles was coordinated in the scenario-based training. The observed training was performed with Simunition Training. The officers trained with realistic training equipment while in full police uniforms, including bullet-proof vests. The officers also wore protective head, face, and neck protection. After

each scenario, the actors and instructors provided scenario debriefings. The debriefings facilitated two-way communication between the training participants and instructors. During the scenario debriefs, tactics were explained and additional options to effectively manage the scenario were discussed openly without judgment.

There was some noticeable stress indicators involved in the training as the participants appeared to breathe heavily. In most of the scenario sessions, Simunition cartridges were fired by the training participants and actors. One of the instructors discussed the sympathetic nervous system and how it affects the ability to perform in a combat environment. The instructor explained this concept as "fight or flight" in which hormones are released under extreme stress and blood flows to gross motor skills to assist with running or fighting (the instructor further described this as "high jacking of the brain"). Moreover, training participants interacted with other actors that played the parts of injured and traumatized students, citizens, and suspects. The scenarios included simulated noises of gunshots and screaming actors, which created stressful conditions. The investigator took notes of these training sessions throughout the data collection phase.

All of the training sessions provided a written assessment of the key training concepts. In two of the observed training sessions, the same assessment tests were provided during the start and conclusion of the training. The training participants appeared to understand the concepts at a satisfactory level, and no failing tests scores were observed. The training sessions ended with the instructors providing their contact information if training participants had additional questions. Six of the police agencies with fewer than 40 sworn officers indicated that they have active shooter training briefs

during patrol employee work days. The results of the study showed that the majority of police agencies with fewer than 40 sworn officers trained on the issue of response to active shooter incidents with more frequency than police agencies with more than 40 sworn officers. Police agencies with more than 40 sworn officers complained that manpower shortages are often a barrier when attempting to train all departmental employees. These agencies indicated that their high dispatch call ratios created an environment in which it was difficult to train all of their officers regularly.

Research Question 3

Utilization of technology purportedly enhances a response to an active shooter incident. Forty percent of the police agencies revealed that they had access to school district video camera systems. As previously mentioned, one county police agency reported the ability to access locked school doors in their district with a key fob system. The key fob system expedited the opening of doors and lessened the use of breaching equipment. This agency also had a cellular telephone application that allowed its officers to view school video camera information. This technology was funded by their local school district. Another agency mentioned technology in its policies and procedures, citing the mandatory supply and use of technologically advanced ballistic vests, which are normally prescribed to SWAT team members. All of the agencies reported having at least one rifle to be used during active shooter incidents.

The observation of the training sessions revealed that the technology used during training included video recording devices, Simunition, and paintball guns. Technology was used in the training to create a more realistic environment in which participants could

demonstrate learned tactics and decision-making processes. The Simunition and paintball guns created a visual marking where trainees and actors were struck with the paint cartridges. Video camera technology provided the training participants with the ability to visually observe mistakes and prescribed techniques. Technology allowed for immediate assessment and demonstration of the active shooter response techniques.

The technology was linked to tactical objectives in the manner of increasing the ability of police officers to enter the active shooter threat area more quickly and safely. The technology demonstrated linkage to the tactical objectives when observing multiple police agencies training together with common tactics. Moreover, the technology of Simunition and paintball guns provided an increased realism to the scenario-based training sessions. The officers observed during the training demonstrated some stress when engaging in the scenarios and a few minor injuries were observed. There was no demonstration of a linkage to strategic objectives.

None of the surveyed police agencies has responded to an actual active shooter incident. All 20 of the police agencies believe that surveillance cameras could provide a picture of the active shooter threat area in schools, thus decreasing the timeframe to engage the accused. Key fob technology will be used to access locked doors without the carrying of keys or placing citizens in jeopardy. Technologically advanced ballistic protection vests and rifles serve to facilitate safer approaches to the accused for immediate neutralization of the threat.

Analysis Details for Research Question 3

Surveillance and two-way communication technology was largely utilized to increase the visual threat awareness of responding police officers while maintaining communication warning systems for citizens. The university police agencies demonstrated the most use of citizen notification technology systems for the purpose of alerting students and other citizens of an active shooter incident via its public announcement emergency call box capabilities. All of the police agencies reported that they planned to alert the media for citizen notifications of an active shooter incident. Only 40% of the police agencies reported that they would notify citizens of an active shooter incident via social media.

Social media technology was used as a means to communicate vital messages for citizens in the area. The majority of the police agencies did not have a firm grasp of social media technology as a whole; only about 40% of the agencies had social media sites that could be used to post citizen messages. However, 60% of the police agencies had some form of communications such as Nixle (one-way communication system) to alert citizens over the Internet and cellular lines. Social media was viewed in a positive manner in which to deliver messages to the public about critical incidents. Discussion with the study participants indicated that there was a certain level of discomfort regarding the use of social media. Social media discomfort was related to the monitoring of social media sites that allows negative comments about the police to be aired over the Internet. Two of the police chiefs argued that they did not want to create a platform for every person that is upset with the government. Four agencies with fewer than 40 sworn

officers argued that during an active shooter incident, they would not have the time to send a message to citizens over the Internet.

The technology engaged by police agencies seeks to increase the layers of police officer protective gear while providing them with tactical tools that assist in quicker movement to the threat. Increased protective ballistic plated vests and breaching tools were assessed by police agencies as providing quicker and safer movements to the threat. Thirty percent of the police agencies reported that their SWAT team members had level IV ballistic vest protection, while non-SWAT team members had the lower level III ballistic vest protection. One university police agency issued level IV vests to all of its police officers.

There was some discussion with agencies that had plain clothes detectives and whether they were included in the active shooter preparedness planning. There was an obvious budgetary concern in arming detectives with rifles in their unmarked vehicles. One issue of concern was how to mount the rifle to mitigate the probability of larceny of the rifle from the vehicle. The agencies that mentioned this concern stated that they wanted to arm their detectives with rifles and were waiting on grants to fund this initiative. One police agency with over 40 sworn officers maintained available rifles in locked office cabinets for detectives and other police administrators.

Police agencies embrace the technology of mobile cellular smart telephones to access school surveillance cameras when arriving at a school shooting. Police agencies use this technology in a manner that seeks to produce a picture of the threat area to assist responding officers with movement of the active shooter. Other police agencies used key fob technology to assist in opening locked doors during an incident. In addition,

technology such as specialized bolt cutters and breaching systems was deemed vital for the responses to active shooter incidents.

The agencies indicated that the present trend in active shooter preparedness was the notion of medically treating the wounded more quickly. One agency with over 40 sworn officers said that they have limited influence on the fire and EMS response. However, they believe that they could train officers in applying tourniquets as a way to improve medical triage systems.

Research Question 4

One evident theme in the analysis was that municipal police agencies with fewer than 40 sworn officers tend to collaborate more with their county police agencies relative to active shooter preparedness. It was found that agencies with over 40 sworn officers were far less inclined to collaborate with county and municipal agencies when creating common strategies, tactics, training programs, and policies for active shooter preparedness. A review of mutual aid agreements, memorandums of understanding, and interviews indicated that police agencies will assist other agencies with the response of an active shooter incident, but agencies tend not to collaborate regarding strategic policy planning. County police agencies tend to display leadership positions concerning training for active shooter responses with training curricula and county-wide trainings. This county-wide communication planning is often the result of state and federal grant requirements. Agencies don't engage in strategic planning relative to active shooter technology systems. Agencies with over 40 sworn officers tend not to look toward county agencies for direction and guidance relative to active shooter preparedness.

Analysis Details for Research Question 4

The regular meetings of area chiefs of police, sheriffs, and tactical commanders were mentioned as a key foundation concerning police agency collaboration conversations. Regular meetings between area police chiefs and sheriffs were described as a quorum in which police administrators could request collaborative networks and discuss strategic initiatives. In addition, one police agency representative said that the police chief and sheriff meetings provided key information for senior administrators to address policy concerns and changes. The police chiefs and sheriffs often discussed active shooter incidents from the perspective of risk management. However, it was the SWAT tactical commanders who demonstrated the most influence for implementation of active shooter training tactics.

The SWAT tactical commander meetings provided a forum in which mid-level managers could discuss tactical changes based on updated research in the tactical community. The tactical commander meetings were often instrumental in changes to active shooter training environments and tactical planning. Because most of the tactical commanders had SWAT experience, they were often looked upon by their senior-ranking administration as experts in active shooter incident preparedness. SWAT commanders and others with such experience were viewed as being instrumental to policy changes and collaborative network maintenance regarding active shooter preparedness.

Police agency collaborations with fire and EMS were observed as limited at best. Only two agencies mentioned that they regularly met with fire and EMS to discuss training and logistics regarding active shooter incident preparedness. One of the university police agencies expanded on their relationship with fire and EMS, arguing that

their collaboration is one that is sought to decrease the time in which wounded persons receive medical treatment. This university police agency elaborated that there are logistical concerns whenever multiple police, fire, and EMS units arrive on a crime scene. Furthermore, the university police agency argued that police, fire, and EMS should train together more frequently. However, the majority of the surveyed police agencies failed to collaborate with fire and EMS on the issue of active shooter incident preparedness. The majority of the surveyed police agencies provided limited or no medical training concerning medical triage. However, there was some mention in the observed training sessions that fire and EMS should attempt to enter the threat area more quickly.

One city police agency argued specifically that collaboration with the Federal Bureau of Investigation (FBI) was a necessity when addressing the issue of active shooter incident preparedness. This participant stated that not many agencies understand the active shooter resources the FBI has to offer local police agencies. The resources are largely threat assessment training, advanced law enforcement response training, hazardous device training, evidence, and recovery teams to assist mass-casualty investigations, victim specialist resources, and media training. Of the 20 agencies interviewed, only one agency indicated that the FBI was a resource for active shooter preparedness.

Collaboration on the issue of strategic objectives was limited. There was a distinct notion that bordering police agencies within close proximity tend to collaborate more readily than agencies that are geographically farther apart. One of the agencies articulated that active shooter preparedness collaboration is based on resource allocation and the need to create networks to immediately assemble tactical resources for an

emergency. All 20 of the agencies believed that other agencies in the area would respond to assist with a local active shooter incident. Notably, agencies with more than 40 police officers seemed less inclined to collaborate with other agencies overall. However, all police agencies expressed that collaboration on the issue of radio communications is a valuable resource that exists in the police, fire, and EMS arena. Five of the interview participants mentioned that radio interoperability with fire and EMS remains a viable concern.

Police collaboration with businesses was limited to the use of their buildings for active shooter scenario-based trainings. Collaboration with schools existed with many of the police agencies. The majority of the agencies attempted to establish and maintain collaborations with their local schools that included assisting with lock-down drills, policy making, and training school employees and students. Police agencies looked to schools concerning surveillance cameras and electric door entry technology funding. Several of the surveyed police agencies had key fob systems that were funded by local school district grants. One agency with over 100 sworn officers indicated that school surveillance camera access was being worked on at the time of this study. The agency in question was unclear whether the technology would be used in training exercises.

Collaboration Barriers

Some collaboration training barriers included scheduling, manpower issues, and differences in tactics, training sites, and budgetary concerns. Collaboration during active shooter incident training found that one police agency believed their response tactics were more effective and therefore refused to allow their officers to be educated on certain

tactics by outside agency instructors. The issue of what tactics are superior can be a collaboration barrier. The majority of the police agencies, with the exception of the university agency with over 40 sworn officers, said that it was difficult to schedule their officers for active shooter training, mainly because it created a manpower shortage in the patrol division. The issue of a proper training site to house the scenarios was an expressed barrier for 40% of the agencies. Two of the police agencies articulated the need to build an area training site in which multiple police agencies could assist financially for allotted use of the site.

Budgetary barriers were echoed amongst the majority of the policing agencies. Five agencies articulated the desire to engage active shooter training scenarios with Simunition but were hampered because of budgetary constraints. However, the two surveyed university police agencies and one of the county police agencies were among the highest in their ranking of expressed collaboration barriers. This university police agency expressed that it had difficulty in collaborating with the city municipality within its jurisdiction. This university police agency also expressed that regular communication with mid-level managers and patrol officers could be improved with area police agencies.

Overall, police collaboration with other police agencies is loosely connected as articulated by DeLone (2009). Police agency collaboration relative to active shooter incident preparedness is based on the need to acquiesce available resource streams when needed. Collaboration found during this study is best described as prompted by the need for reactionary responses.

Staying Current with Tactics

One constant theme was the notion that police agencies demonstrate a desire to stay current relative to training and equipment, yet active shooter policy is not updated yearly. When addressing the establishment of threat assessment protocols and increased active shooter citizen training, many of the agencies reported that they were in the process of becoming current with national standards. The majority of the police agencies indicated that their tactics had recently changed because of new tactics and standards learned from police trade publications. Police agencies argued that smaller teams and even single-officer responses were now considered effective response tactics.

Sixty-five percent of the police agencies argued that their intentions to stay current with accepted active shooter incidents is based on information learned from trade magazines. A representative from one police agency complained that there is not a lot of information regarding threat assessment protocols and social media notification systems. Representatives from this agency stated that they had an informal threat assessment system that was not documented. They confirmed that threat assessment protocols may offer value to their active shooter preparedness systems.

Normative Model

The normative model of police active shooter incident preparedness demonstrates limited collaboration relative to strategic planning (see Figure 3, Normative Model). This model demonstrates that there is a general intent by police agencies to assist other agencies with tactical responses to active shooter incidents. There was some

collaboration among police agencies with fewer than 40 sworn officers with their respective county policing agency. However, agencies with more than 40 sworn officers tended to remain isolated when creating tactical responses and attended mutual training sessions only to demonstrate that they were open to cooperation. When it came to actual collaborative planning to create common response plans with other police agencies, the relationship was strained. The planning processes demonstrated that police agencies individualized their active shooter response planning according to jurisdictional boundaries.

Police agencies with fewer than 40 sworn officers collaborated with their county agencies when discussing active shooter incident preparedness. These agencies also relied on county agencies to set their active shooter agendas and assist with infrastructure implementation. The majority of police agencies, according to the normative model, engaged primarily response planning and training with limited collaboration with fire and EMS. The implementation infrastructure for multiple agency planning was based on individual jurisdictional budgets unless there was a multiple agency grant involved. There was no regular facilitation of police agency collaboration regarding active shooter response training and evaluation systems. Overall, the normative model did not conform to an active shooter prevention model, including threat assessment protocols and community awareness education. In addition, the data support that post active shooter incident planning variables, such as investigation planning, were not observed. The normative model demonstrates what was found among the majority of the police agencies.

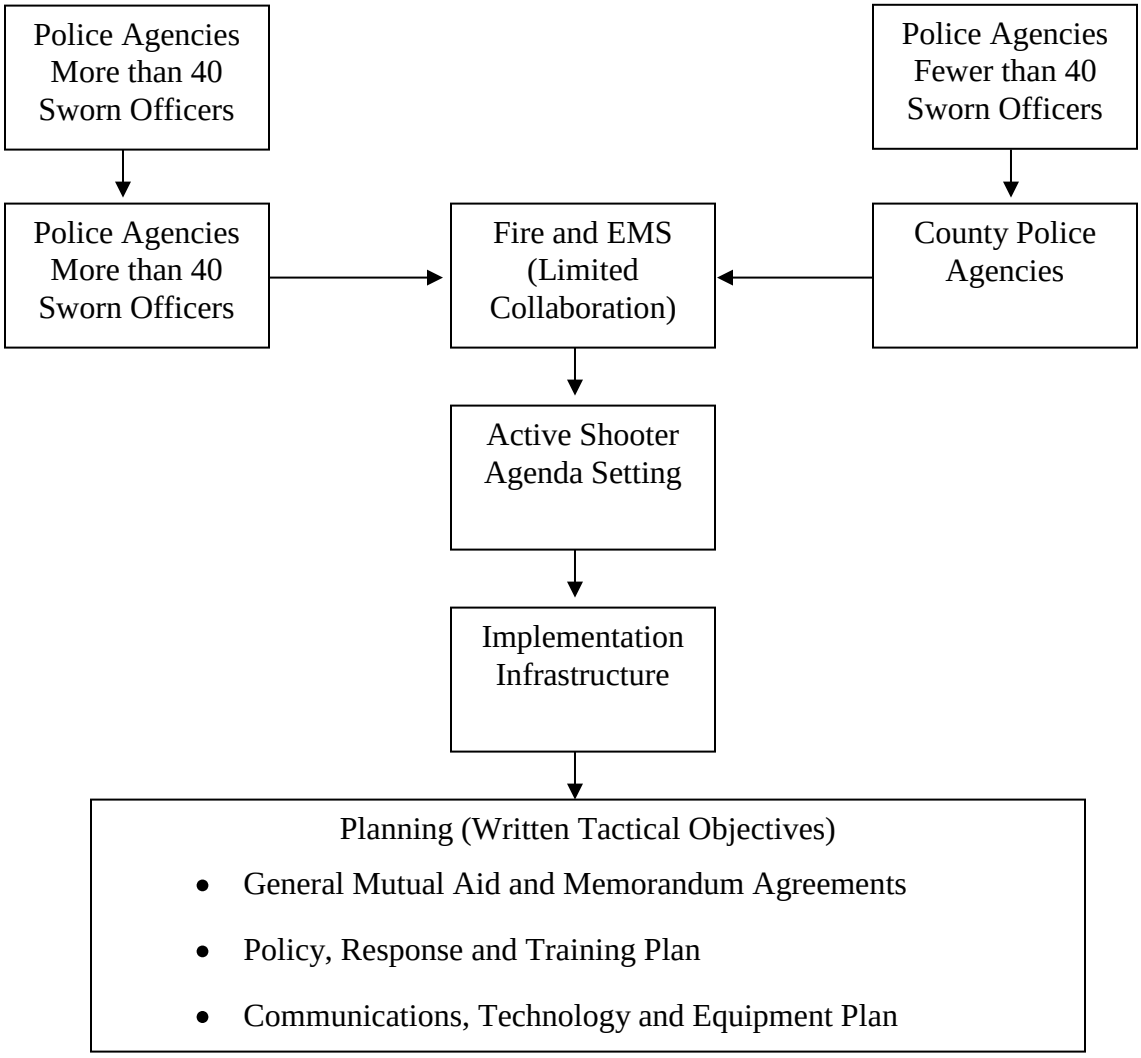

Figure 3. Normative model.

CHAPTER V

DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS

Throughout the writing of this dissertation, active shooter incidents continued to occur throughout the United States, including Aurora, Colorado; Sandy Hook Elementary School; and the Navy Yard in Washington, DC. The development of this dissertation was based on a desire to first understand active shooter incident preparedness of the surveyed policies agencies and then advocate recommendations for beneficial systematic change. The topic of active shooter incident preparedness is a significant issue of which public administrators need continued research to assist in their decision-making capabilities. Nevertheless, the results of this study seek the development of a normative model to prevent and mitigate injuries and death. In development of this normative model, the research examined the active shooter preparedness incident implementation of 20 police agencies in a bordering tri-county area. Interviews and written documentation were examined and training was observed for the purpose of triangulating the data points throughout the course of this investigation.

The study advanced from the examination of active shooter strategic and tactical objectives to the assessment of technology, training, written policies, and collaborations relative to active shooter incident preparedness. While this study had limitations, it added to the current body of active shooter incident preparedness literature. Prior to this study, there was limited research that addressed the issue of active shooter incident preparedness for local law enforcement. Specifically, this study examined how law

enforcement agencies collaborate, use technology and equipment, implement policies and objectives, and conduct training when addressing the issue of active shooter preparedness. The study sought to provide a comprehensive and holistic view of active shooter incident preparedness.

Discussion

One aspect of this study involved the research of police tactical and strategic objectives relative to active shooter incident preparedness. Police objectives guide the understanding of how active shooter incident preparedness is implemented. The study results confirmed that police agency responses to active shooter incidents have changed since the assessments of the Columbine High School shooting. The former tactic to wait for a SWAT response is no longer an accepted active shooter response tactic. Currently, all sworn officers are encouraged to immediately proceed to the threat area for the purpose of neutralization. These changes demonstrate that active shooter incident response tactics continue to evolve, therefore complicating active shooter preparedness systems. There is currently a paradigm shift with fire and EMS personnel in that they are now being asked to enter the threat area while the threat is active. This shift will require training, support, and collaboration with police who have been tasked to provide security in casualty checkpoints for fire and EMS responders. Although the study did not address the issue of fire and EMS support for mass-casualty checkpoints, it is believed that fire and EMS responders will have difficulty in supporting this initiative.

This study confirmed that police active shooter incident response tactics have changed as a result of active shootings at Columbine High School and Virginia Tech.

The results of this study suggest that as more relevant information of active shootings, such as Aurora, Colorado; Sandy Hook Elementary School; and Washington's Navy Yard, presents itself, there will be continued evolution of active shooter incident preparedness. Police agencies must engage organizational systems that evaluate active shooter incident research regularly and implement new leading practices. Moreover, those in the political arena must understand that police budgets are strapped and that there should be funding streams for tactical training, technology, equipment, and threat assessment implementations.

Analysis of police agency written documentation supports the conclusion that active shooter incident preparedness strategic objectives are needed to produce a holistic model. Police stakeholders and actors should properly engage strategic objectives. In order to manage police agency active shooter preparedness, there must be clearly defined written strategic objectives that are periodically evaluated. The articulation of strategic objectives is arguably significant in gauging active shooter incident preparedness performance. Twenty percent of the police agencies indicated that their active shooter incident strategic objective is to maintain a common active shooter response. In assessment of this objective, there was must be strategic planning and collaboration among the police agencies to support this common response. Not only must active shooter incident response training be similar, but uses of technology, equipment, and written documentation should also be discussed.

Where there are no clearly defined written strategic objectives, it becomes problematic in evaluating the progress of a police agency's active shooter preparedness. Sixty-five percent of the police agencies (interviewees) mentioned that their strategic and

tactical objectives were linked in their overall departmental philosophy and training. This is an area of preparedness that should be periodically assessed when attempting to develop a holistic model. Police agency objectives should be clearly defined for the overall management of resources. Public administrators need clearly defined objectives to properly gauge performance, training, and resource management relative to active shooter preparedness.

The principal investigator argues that police agencies should seek to construct and implement active shooter incident strategic objectives. Clearly defined strategic objectives contribute to the creation of a comprehensive and holistic approach to active shooter incident preparedness. In addition, strategic objectives may assist with the engagement of active shooter threat assessment protocols. The data points show that police active shooter incident preparedness is limited in its implementation of threat assessment protocols and active shooter incident training and education for citizens. These results sustain that there is a formidable lack of proactive and preventive tactics when it comes to active shooter incident preparedness. The police are less inclined to instruct citizens on what tactics they should employ to lessen their injury and death relative to active shooter incidents.

The possibility of a major active shooter incident appears to be the impetus for why police agencies desire a common active shooter incident response. The study results proved that there is a need for police agencies to better engage operational capabilities and limitations during the strategic planning process for active shooter preparedness. The strategic planning process may further assist in the creation of a holistic approach by examining active shooter incident preparedness as a comprehensive system. The

strategic planning process gauges active shooter incident operational capabilities and identifies shortcomings that motivate the creation and maintenance of active shooter incident holistic preparedness systems. Strategic objectives and related planning may provide a more systematic approach to police collaborations concerning active shooter incident preparedness. Exercises in strategic planning may assist police agencies in analyzing performance and building effective response systems. Strategic planning assists in the development of a normative model for active shooter incident preparedness.

Development of a Holistic Prescriptive Model

The analysis reveals seven chief elements that stand out as key components of the holistic prescriptive model:

1. A holistic or comprehensive approach to strategic planning and coordination of related functions and resources (police, fire, EMS, hospitals, schools, businesses, etc.) should be undertaken for the purpose of increasing active shooter incident preparedness systems relating to prevention and response.
2. Strategy and tactics needs to be written—made a part of standard operating procedures and communicated to all sworn officers. Strategies should be communicated to policy makers when establishing implementation infrastructures.
3. These procedures and their content should be an active part of rigorous, periodic, and multi-agency training systems.

4. Technology usage and evaluation extends beyond weapons and protective gear to include communications equipment, community notification and education, training, and victim mitigation systems.
5. Threat assessment protocols and related citizen and officer training are needed to assist with prevention.
6. A post active shooter incident management and victim services plan is needed.
7. Collaboration is essential and constantly evolving across agencies (public and private) and among needed public safety functions.

Figure 4, Holistic Prescriptive Model, exhibits a prescriptive model of police active shooter incident preparedness collaborations and is based on the findings. A holistic approach suggests a systemic response that is based on the concepts found in this study. Moreover, this prescriptive model is rooted in the support of a host of actors and stakeholders. These stakeholders and actors must engage various forms of collaboration in order to create a heightened sense of preparedness. Strategic planning with these actors may include, but is not limited to, police, fire, EMS, hospitals, schools, businesses, citizen groups, and community health agencies. Strategic planning will assist with the understanding of a police agency's operational and tactical limitations and capabilities. The use of strategic planning may further engage the concept of building trust with other agencies during this process. Coordination of objectives is necessary for the formulation of effective active shooter incident preparedness and written documentation will assist with this function.

The study results indicated that local police agencies are interested in creating active shooter incident preparedness systems to protect their community. Assessments of

the interviews show that police agencies understand that they need established objectives for maintaining preparedness systems. However, the document content analysis failed to support the notion that police agencies maintain related written objectives. Strategies and tactics need to be written and implemented so that all members of a police agency have consistent understandings. Written strategies, responses, training, and tactics should be communicated to all sworn officers and reinforced with training. Moreover, written strategies and tactics necessitate regular audit and research to ensure leading practices are being used. This mandated review of active shooter incident policies should be included in police agency standard operations and regular changes should be communicated to other police agencies for their understanding.

Police agencies and their collaborative partners should engage in rigorous and periodic multi-agency training. Strategic planning of training is vital to the success of active shooter incident preparedness. Budgetary capabilities and limitations for training operations must be addressed with a host of actors and stakeholders. There must be consistent implementation infrastructure building in place to assist with active shooter incident preparedness budgeting. Training relative to active shooter incidents should engage not only the active shooter response efforts but prevention campaigns. Training should also encompass the post management of an active shooter incident and strive to understand how multiple agencies interact during these processes.

Rigorous and periodic multiple-agency active shooter response trainings must include the use of the National Incident Management System, in particular the Incident Command System. The use of the Incident Command System provides guidance with multiple-agency responses, including police and fire, relative to major incidents.

Training between police and fire agencies should be ongoing and is imperative to successful operations. Training with police and other agencies will further necessitate the need to define and understand common police and fire terminology, protective gear, equipment use, and overall practices concerning the collaborative agencies.

Ongoing technological usage and evaluations should be included in regular and ongoing systemic reviews of active shooter preparedness. The technology involved in active shooter incident preparedness must entail more than weaponry and protective gear systems. That isn't to say that police and other responders aren't deserving of the best possible equipment when responding to active shooter incident. Improvements in protective gear must be periodically reviewed and changed. Regular review and replacement of weapons and protective gear ensures that first responders have the best systems of protection available when engaging an active shooter.

Technological usage extends past the notion of sworn officer protective gear. Radio interoperability is the ability of multiple agencies to communicate across radio channels. Radio interoperability is vitally important to all first responders involved with an active shooter incident. Another aspect of technology is the use of available communication streams needed to communicate with citizens before, during, and after an active shooter incident. Police agencies and fire departments should have citizen notification systems to communicate important information to community members. Exploration of other manners in which citizens may deliver critical information during an active shooter incidents include the ability to send emails, pictures, and video to police dispatch systems from cellular and other communication systems. Technology in the

delivery of vital information to police dispatch systems must evolve to assist active shooter incident preparedness.

Fire personnel have the ability to assist with building compliance requirements when seeking to implement victim mitigation systems. Future building should take into consideration the thought process relative to active shooter incidents. Technology such as magnetic doors, two-way communication systems, surveillance systems, and other technology relative to active shooter mitigation should be engaged in the strategic planning process with all involved actors and stakeholders. Technology use, when available, should be a part of the training process and included in written review and budgetary systems.

Threat assessment protocols relative to sworn officer and citizen training are necessary for a holistic approach to active shooter incident preparedness. Threat assessment protocols engage the concept of prevention of active shooter incidents. As a result, these protocols must be engaged in citizen training campaigns. Police agencies must advocate for citizens to provide witness information relative to the prevention of active shooter incidents. Skolnick (1994) argued that police culture tends to isolate the police from citizens. The police must understand that information flow from the citizenry is a part of active shooter prevention and overall preparedness. Police leadership must seek to minimize cultural traits within police departments that hamper information flow between citizens and the police about active shooter incidents.

Police agencies must be trained to campaign for more citizen information streams, which may include social media. Police and citizens must understand the concept of leakage (Meloy & O'Toole, 2011) relative to active shooter prevention. As a result,

training for all involved stakeholders and actors is needed for the effective implementation of threat assessment protocols. Fire and EMS personnel should be enjoined in the conception of threat assessment protocols because their duties and responsibilities associate them with people who may be engaged in the research and planning process of active shooter incidents. Therefore, fire and EMS should be trained to communicate relative preventive information about a planned active shooter incident. Fire and EMS implementation of threat assessment protocols are necessary to an effective holistic approach to active shooter preparedness.

A holistic approach to active shooter incidents includes an ongoing evaluation of victim services plans. This concern may necessitate communication with federal agencies that often assist with major disasters and incidents. This approach must identify collaboration opportunities for active shooter preparedness and evaluate mutual aid agreements, memorandums of understanding, memorandums of agreements, etc., for beneficial outcomes relative to the active shooter incident preparedness system.

Figure 4, Holistic Prescriptive Model, illustrates the issue of holistic collaboration in active shooter incident preparedness. The collaboration flow of police agencies is connected with a multi-pronged approach to active shooter incident preparedness that tactically and strategically plans responses, prevention, and citizen awareness and training. This collaboration further exists when examining technological, equipment, manpower, training, and other resource capabilities and limitations. Police agencies with fewer than 40 sworn officers are more apt to collaborate on the formulation of objectives with their respective county agencies. Based on the study, county police agencies

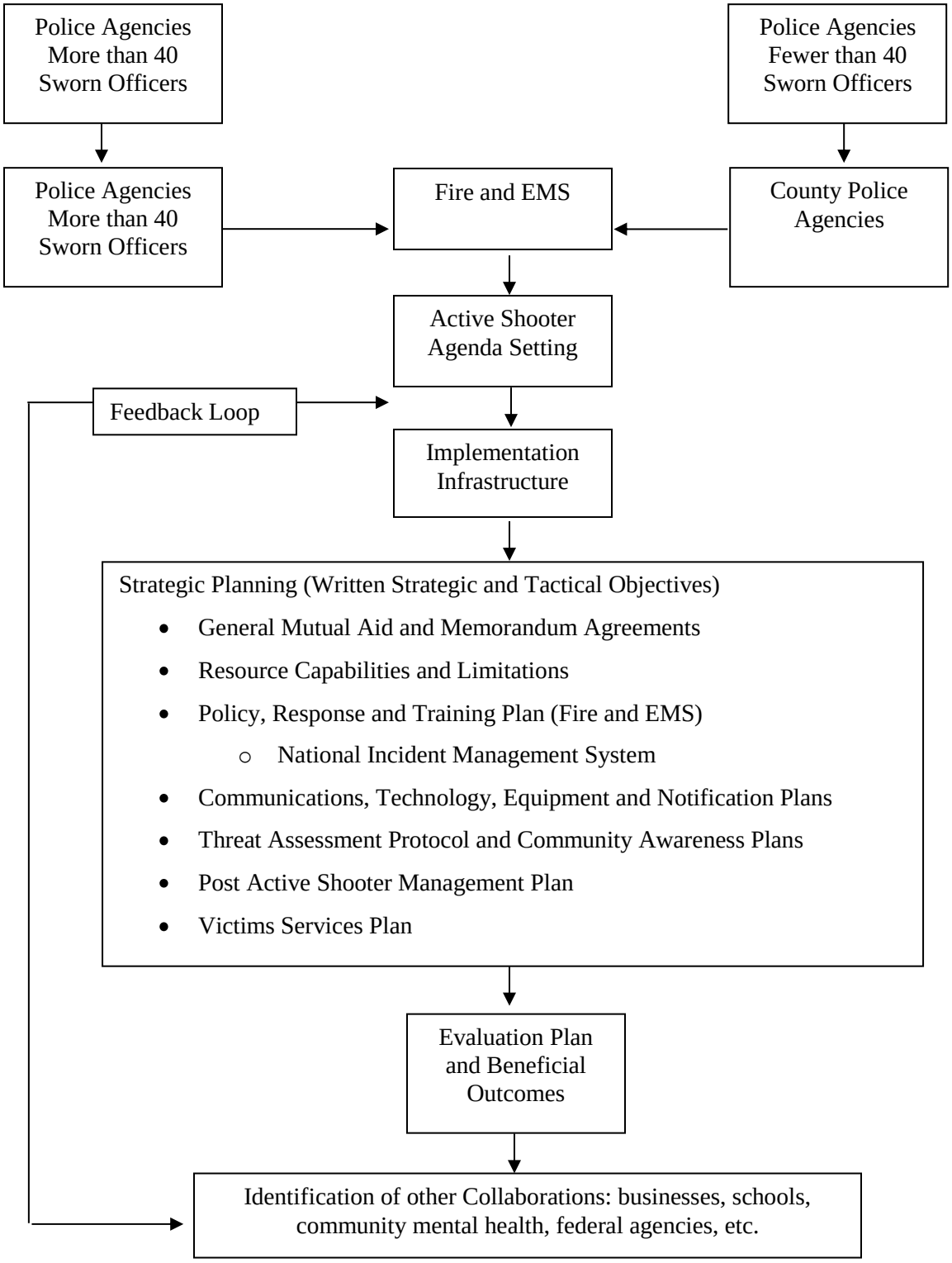

Figure 4. Holistic prescriptive model.

demonstrate the ability to effectively engage active shooter incident preparedness networks with local police agencies. Agencies with over 40 sworn police officers have the ability and the resources to engage holistic active shooter preparedness systems in a collaborative capacity.

Recommendations Future Research

There is limited research concerning police active shooter incident preparedness. Therefore, it is imperative that research continue to explore this issue for the purpose of analyzing systems that engage critical assessment. The findings of this study conclude that active shooter incident preparedness research must engage holistic systems that address collaboration. This holistic approach produces a comprehensive state of active shooter preparedness that engages prevention, response, and post-management systems. As a result, additional police collaboration research is needed to understand the dynamics of police agency interaction with various disciplines. Research and exploration of collaborative agreements of active shooter incident preparedness related to responses, training, equipment, tactics, and technology are just some of the systems that deserve future research. Future researchers should seek more understanding of police mutual aid agreements and how they relate to overall active shooter incident preparedness systems.

Usage of grounded theory assisted this study in understanding what police agencies are doing to actively prepare for active shooter incidents. The interviews suggest that there were limited streams of collaboration between police and fire on the concept of active shooter incident preparedness. Further research is needed to understand the dynamics of police and fire collaboration on a host of issues. In addition, research

should address which systems or mechanisms public administrators may implement to increase collaboration relative to active shooter incident preparedness and other issues relative to public safety. Police and fire collaboration is utterly important to the active shooter response and therefore deserving of more analytical research.

Future research should address the issue of active shooter incident preparedness and limited collaboration with fire and EMS. The interviews of this study suggest that even with limited levels of collaboration with fire and EMS, police believed they had effective active shooter incident preparedness systems. Conversely, the study results showed that there was an apparent strain in cooperation between city and county programs relative to active shooter preparedness. Future research should explore political stakeholders and actors concerning inputs relative to legislative changes that may be considered to aid active shooter preparedness.

Additional literature should include analysis of citizen assessments training systems to minimize loss of life and injuries relative to active shooter incidents. Moreover, research of police officer opinions about teaching citizens active shooter mitigation techniques is another area of future research. This study argued that there was an inconsistency of equipment, technology, and tactical capabilities relative to the police agencies. The question now is whether active shooter incident preparedness should include some common and mandatory types of equipment and technology. Fire safety historically addressed the issue of physical infrastructure to reduce fires.

The incorporation of written active shooter strategic objectives appears to be an area of needed future research. Why don't police agencies develop and implement written strategic objectives relative to active shooter incident preparedness?

Furthermore, examination of active shooter collaboration and its relation to the existence or non-existence of strategic objectives is a major issue that is deserving of future research. The exploration of this issue with additional cases in other geographic locations could assist in further understanding. Data discerned from diverse locations could provide varied results that may prove instrumental in the development of active shooter preparedness change systems. There is still much to assess about active shooter preparedness strategic and tactical objectives.

The project sought to empower public administrators with information that will minimize injuries and death. This research provided public administrators with a normative and holistic prescriptive model concerning collaborative networks relative to active shooter preparedness. Further research on what public administrators value in active shooter incident preparedness literature may be beneficial. While this study collected data from a variety of police executives, further research specifically examining police chiefs and sheriffs on the subject may also prove useful. The research should encourage police executives to enhance their protocols and response systems regarding active shooter preparedness. As such, additional research on police leadership styles may also clarify the understanding of active shooter incident preparedness systems.

While active shooter incidents remain a rare tragedy in our society, they offer an opportunity for society to learn from each incident and improve response and prevention techniques. This study demonstrated that police agencies do not embrace the concept of threat assessment with written protocols and systems. Police attitudes concerning threat assessment protocols remains an area of research that deserves further analytical examination. Research on active shooter incidents suggests that most incidents are over

before police arrive, and therefore prevention of such incidents remains a viable aspect of future research. Finally, police must understand that active shooter incident preparedness must address the issue of prevention, response, and post management within their planning, tactics, training, and overall management of resources. As a result, further research on the overall system of active shooter incident preparedness should advance.

Conclusions

Police agencies clearly define their active shooter incident tactical objectives to positively affect a reactive active shooter incident response system. The results of the study found that strategic objectives relative to active shooter preparedness are not defined. Overwhelmingly, police agencies fail to actively engage threat assessment protocols that focus on the prevention of active shooter incidents. The reactionary attitude of police hinders active shooter incident preparedness. Police should be encouraged to formulate proactive responses through the promotion of related grants. In addition, collaborative strategic planning among police and other entities is needed to increase the effectiveness of active shooter incident preparedness. Clearly defined written strategic and tactical objectives are also needed to produce a holistic approach to active shooter incident preparedness. The identification of strategic objectives may assist agencies not only in planning for responses to active shooter incidents but also in the overall maintenance of collaborative networks. Furthermore, police should collaborate more with first responders, including fire and EMS, in an effort to increase preparedness. Grant funding and the need to increase operational and tactical capabilities may motivate police agency collaboration.

The use of grounded theory assisted with the production of the prescriptive holistic active shooter incident preparedness model. Grounded theory allowed for the use of real-world observations of police agencies to assess how police agencies, specifically ones in mid-Michigan, prepare for active shooter incidents. The normative model assisted in better understanding associated barriers that hinder implementation of effective active shooter incident preparedness systems. The normative model allows for a more comprehensive model of active shooter incident preparedness that addresses related issues concerning prevention, response, and post-scene management of active shooter incidents. The study found that police officers were not properly trained or informed about threat assessment protocols and do not view them as being effective at preventing active shooter incidents. Police allocate limited resources to train citizens about active shooter injury and death mitigation techniques. The grounded theory directed the study in a manner that contributed to the understanding and development of themes and associated nuances associated with active shooter incident preparedness.

The holistic approach to active shooter preparedness addresses the issues of prevention, response, citizen mitigation training, equipment, technology, and collaboration. Citizens and first responders need the best available training for prevention, response, post management, technology, and equipment in order to mitigate active shooter injuries and deaths. The holistic approach to active shooter incident preparedness uses strategic and tactical objectives to identify active shooter incident preparedness inefficiencies. This approach further seeks to strengthen police collaborations with varied institutions and disciplines by clarifying operational capabilities and limitations. The holistic approach to active shooter preparedness

addresses police policy guidance through the direction of written strategic and tactical objectives reinforced by philosophy, training, evaluation, and periodic review. This approach examines active shooter preparedness in a comprehensive manner that balances response, prevention, and post-incident management during crisis planning.

Effective active shooter incident preparedness literature is vital to our society in that it has the objective to save lives and mitigate injuries. It is utterly important for political actors to engage funding streams for equipment, training, and prevention campaigns. Engaging active shooter incident preparedness from the standpoint of a collaborative mindset may assist with active shooter incident response standardization and related technology and equipment inventory as well. While each incident provides a different set of circumstances, there is a clear necessity for continued active shooter preparedness research. This research is merely another step toward understanding the phenomenon of active shooter incident preparedness. Policy makers must understand that active shooter incident preparedness requires budgetary support for prevention, response, technology, post management, and collaboration building and maintenance. Finally, this study adds to the body of literature of active shooter preparedness that continues to search for ways to mitigate associated injuries and death.

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Appendix A

Requesting Participation Letter

Requesting Participation Letter

Dear Police Official,

My name is Daryl Green and I am a Captain at the Lansing Police Department. In addition to my Police employment, I am also a doctoral student at Western Michigan University. I am writing to ask you to be part of a qualitative research study on police response to active shooter incidents. This study is part of the requirements for a doctoral degree in Public Administration. I hope you will agree to participate.

Participating in this study will include:

An interview conversation that should last approximately 30-60 minutes will be conducted at a private location of your choice. This interview conversation will be recorded by a digital tape recorder, and I may also take written notes. If needed, a follow up meeting may occur which will allow me to check for accuracy of my notes and to ask any follow up questions I have after reviewing the transcripts of our first meeting.

Participation in this study is completely voluntary and there is no penalty for not participating or for withdrawing from the study. If you agree to participate in this study, your identity will be kept strictly confidential. Your name and law enforcement agency will not appear in the study. Your interview will be referenced by a pseudo name. All transcripts will be kept for no less than three years on a hard drive in a locked cabinet in the Dissertation Chair's office after the end of the research.

Please contact me by replying by email to daryl.d.green@wmich.edu or by mail to 2216 Beacon Hill Dr. Lansing, Michigan 48906 or you may feel free to contact me by phone at (517) 505-0333.

Sincerely,
Daryl Green

Appendix B

Consent Document

Consent Document

Department of Public Administration
Dr. James Visser, Committee Chairperson
Daryl Green, Student Investigator
Police Response to Active Shooter Incidents in Michigan, Developing a Normative Model

You are invited to participate in a study examining "Police Response to Active Shooter Incidents in Michigan, Developing a Normative Model. This study is being conducted by Daryl Green, Captain of the Lansing Police Department and a doctoral student in the Public Administration doctoral program at Western Michigan University, under the supervision of Dr. James Visser, his Dissertation Committee Chair.

The following information is being provided for you to determine if you wish to participate in this study. In addition, you are free to decide not to participate in this research or to withdraw at any time without affecting your relationship with the researcher or Western Michigan University.

The purpose of this study is to examine active shooter response, training and department interoperability. If you decide to participate you will be asked to participate in an interview lasting between 30-60 minutes. These interviews will be digitally recorded to ensure the accuracy of the collected information and all interviews will be transcribed into a written record.

Please do not hesitate to ask questions about the study before participating or while the research is taking place. I will be happy to share the results with you at the completion of the study. *Ensuring the confidentiality of data is the norm in research. Your name or law enforcement agency will not be used in the dissertation dissemination process*; rather it will only be known to the researcher. Pseudonyms will be used for participants (i.e. Police Official 1, Police Official 2, and so on) and general terms will be used in reporting results (i.e. "Five of the Police Officials commented…;" "Two Police Officials reported that…;" etc.).

Written transcripts will be stored on a hard drive and contained in a locked filing cabinet at the officer of the Dissertation Chair for no less than three years following the completion of the study. The audio transcripts will be destroyed once the transcription process has been completed and a written record is produced and you are confident that a summary of the written transcript accurately reflects your comments. There are no other known risk(s) discomforts associated with participating in this study.

There are several expected benefits from participating in this study. They are: (1) information on the experiences may produce effective active shooter models; (2) an objective understanding of active shooter police interoperability; and (3) the ability for the researcher to participate in a qualitative study.

If you have any questions about this study, please contact Daryl Green, the student investigator at (517) 505-0333 (cell) or via email at templemsuwmu@att.net or daryl.d.green@wmich.edu . You may also contact the Chair, The Western Michigan University Human Subjects Institutional Review Board (269) 387-8293 or via email at hsirb@wmich.edu, or the Vice President for Research (269) 387-8298 if any questions or issues arise during the course of the study.

This consent document has been approved for use by the researcher for one year by the Human Subjects Institutional Review Board (HSIRB) as indicated by the stamped date and signature of the board chair in the upper right corner. Do not participate in the study if the stamped date is older than one year.

A signed copy of this consent form will be given to you for your records.

_____ _____

Participant Date

Consent obtained by: _____

Interviewer/Student Investigator

_____

Date

Appendix C

Interview Protocol

Interview Protocol

Project: *Exploring Police Active Shooter Preparedness in Michigan. A Grounded Study of Police Preparedness to Active Shooter Incidents, Developing a Normative Model*

Time of interview: _____

Date of interview: _____

Location: _____

Interviewer: _____

Interviewee: _____

Thank you for consenting to participate in this study.

Questions that the subjects will be asked include:

Demographics

1. What is your position and how does it relate to police active shooter preparedness?
2. How many years of police officer experience do you have?
3. Are you presently or have you ever been a SWAT team member?
4. If applicable, how long would it take for your agency's SWAT team to mobilize relative to an emergency response?
5. What if any active shooter response trainings have you participated in either as a student or instructor?

General Interview Questions

1. What is your agency's strategic objectives regarding response to active shooter incidents?
2. What is your agency's tactical objectives regarding response to active shooter incidents?

3. How is your agency's active shooter strategic and tactical objectives linked together?
4. What if any, written policies does your agency have that guides employee strategic and tactical responses to active shooter incidents? How are those written objectives communicated to police personnel?
5. How does your agency help train citizens to mitigate injuries during active shooter incidents?
6. What is the nature of your agency's active shooter response training, how often does your agency train its employees?
7. How does your agency integrate strategic and tactical objectives in the active shooter training, give me an example?
8. Tell me about the nature and scope of your agency's tactical training for response to active shooter incidents are there any barriers to the training?
9. Based on the findings of active shooter incidents in Columbine, Virginia Tech, Aurora, Colorado and Sandy Hook has your agency altered its strategic and tactical objectives?
10. How does your agency's use technology regarding response to active shooter incidents? What technologies do you have available and how will they be used in a response to an active shooter incident?
11. What if any technology does your agency use to train police officers regarding response to active shooter incidents?

12. Does your agency use social media in its response to active shooter incidents, if so, how or why not?
13. Tell me about any technology or equipment needs you would like to see your agency acquire concerning response to active shooter incidents and related training?
14. Does your agency collaborate with any other agencies regarding responses to active shooter incidents, what is the nature of that collaboration?
15. Discuss if any, barriers that you believe may hamper or hold back collaboration between your agency and other police agencies concerning responses to active shooter incidents?
16. Does your agency collaborate with businesses, schools or other entities concerning police response to active shooter incidents, if so, give examples?

Closing Questions

1. Is there a question I have not asked that you like you would like to express about police response to active shooter incidents?
2. How prepared do you believe your department is concerning its ability to respond to an active shooter incident?

Appendix D

Transcriptionist Confidentiality Form

Transcriptionist Confidentiality Form

I, _____, transcriptionist, agree to maintain full confidentiality in regards to any and all audiotapes and documentation received from _____ related to Daryl Darwin Green's doctoral study on Police Response to Active Shooter Incidents. Furthermore, I agree:

1. To hold in strictest confidence the identification of any individual that may be inadvertently revealed during the transcription of audio taped interviews, or in any associated documents;

2. To not make copies of any audiotapes or computerized files of the transcribed interview texts, unless specifically requested to do so by Daryl Darwin Green;

3. To store all study-related audiotapes and materials in a safe, secure location as long as they are in my possession;

4. To return all audiotapes and study-related documents to Daryl Darwin Green in a complete and timely manner.

I am aware that I can be held legally liable for any breach of this confidentiality agreement, and for any harm incurred by individuals if I disclose identifiable information contained in the audiotapes and/or files to which I will have access.

_____ _____

Signature Date

Appendix E

Human Subjects Institutional Review Board
Letter of Approval

WESTERN MICHIGAN UNIVERSITY

Human Subjects Institutional Review Board

Date: June 4, 2013

To: James Visser, Principal Investigator
Daryl Green, Student Investigator for dissertation

From: Amy Naugle, Ph.D., Chair

Re: Approval not needed for HSIRB Project Number 13-06-12

This letter will serve as confirmation that your project "Exploring Police Active Shooter Preparedness in Michigan. A Grounded Study of Police Preparedness to Active Shooter Incidents, Developing a Normative Model" has been reviewed by the Human Subjects Institutional Review Board (HSIRB). Based on that review, the HSIRB has determined that approval is not required for you to conduct this project because you are analyzing agency policies and procedures and not collecting personal identifiable (private) information about individuals.

Thank you for your concerns about protecting the rights and welfare of human subjects.

A copy of your protocol and a copy of this letter will be maintained in the HSIRB files.

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