

A MULTI-METHOD INVESTIGATION OF POLICE DEFENSIVE TACTICS TRAINING
USING A SOCIAL COGNITIVE FRAMEWORK

BY

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DISSERTATION

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ABSTRACT

Police officers are often required to use force to effectively protect themselves as well as the public. In order to prepare officers for these physical demands, recruits receive training in fitness and defensive tactics (DT) during their Police Academy instruction. This study aimed to quantitatively measure the impact of Academy training on recruit officers' self-efficacy (SE) and qualitatively gain insight on police DT training via focus groups with veteran officers.

Participants ($N = 134$; $M_{age} = 26.53$) from across 3 Academy classes completed the SE scale prior to any training and upon completion of their Academy training. The results indicated those with previous self-defense experience scored higher at baseline than the untrained participants. Over 90% of the recruits displayed an increase in SE post-training. Most of the participants credited the Academy control tactics (98.5%) and fitness training (88.1%) with improving their SE. Additionally, mean SE scores were maintained after 6 months of work experience. A directed approach to content analysis was used in the focus groups to address the state of police DT training through the lens of the Social Cognitive Theory. Veteran officers ($N = 11$; $M_{age} = 40.6$) provided valuable insight on police training reform in the area of non-lethal force using their experiences with use of force, personal struggles in training, and the departmental constraints they've faced. Officers expressed support for additional training primarily via the development of grappling ability and realistic training modalities. They also addressed many barriers to training and provided recommendations for overcoming these barriers. Collectively, the two-part study offered evidence for the value of self-efficacy, self-defense experience, and a quality physical training program, on a police officer's physical and mental preparation for force encounters.

Keywords: police training; self-efficacy; fitness; defensive tactics; use of force

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CHAPTER 1: INTRODUCTION

Police officers are responsible for protecting citizens and resolving complex, rapidly evolving situations. Because of this, they are often required to use physical force in order to safely carry out their duties. According to the U.S. Department of Justice (2018), 554,443 police officers were assaulted in the United States between 2008 and 2017. Of these assaults, 442,392 were carried out using personal weapons (i.e. hands, fists or feet) and 29.9% of the attacks resulted in injuries to the officer. Conversely, the Bureau of Justice Statistics (2015) reported that between 2002 and 2011, 715,500 residents stated they experienced the threat or use of non-fatal force by police during their most recent contact. Additionally, 535,300 reported the force used against them was excessive. It is important that officers are both physically prepared and have a high degree of self-efficacy toward handling these physical encounters to improve their safety as well as the safety of the public. This chapter will address: 1) an introduction to the state of police academy training in Illinois; 2) racial factors and life experiences that led to my interest in this topic; 3) Social Cognitive Theory, which is the theoretical framework of the study; and 4) the specific aims and hypotheses for the study.

1.1 Police Academy Training

Over the past 60 years, the formal process of basic police training has become commonplace across the United States. Before this time, police training was largely informal, unstructured, and inadequate considering the demands of the job (Alpert & Dunham, 1997; Walker, 1999). Today, there are police training academies in every state with varying sizes and standards. The training curricula include, but are not limited to, education on federal and state crime laws, traffic enforcement, physical training (including defensive tactics), firearms training, driving skills, arrest procedures, and officer safety (Chappell, 2008).

In the state of Illinois, prospective police officers are required to complete several hundred hours of academy training before becoming certified as a law enforcement officer. There are currently 7 police academies throughout the state with varying requirements for completion. Regardless of the academy one attends, portions of these training hours are devoted to defensive tactics training aimed at teaching officers to use specific techniques and tactics to effectively control and subdue subjects. The specific defensive tactics training curricula that are taught vary greatly by police academy. Regardless of curricula, learning techniques and tactics do not necessarily mean the officer will believe in them or develop the confidence in their ability to effectively perform them when needed. This concept will be explored in my research methodology.

1.2 Racial Issues and My Journey into Law Enforcement

Despite the extensive pre-service training they receive, police officers have been under higher levels of scrutiny for their actions in recent years. According to the Bureau of Justice Statistics (2015), African Americans were 2.5 times more likely than whites to experience the threat or use of non-fatal force by police between 2002 and 2011. Additionally, Lee (2016) noted that in 2015, Black men accounted for approximately 40 percent of the unarmed individuals killed by police in the U.S. although they only made up six percent of the population. Many protests and calls for police reform have resulted from the controversial deaths of several African Americans, including Eric Garner, Michael Brown, Terence Crutcher and LaQuan McDonald, at the hands of the police over the past several years.

As many Americans are already aware, overt racial discrimination toward African Americans in particular, was at one point a socially acceptable act in society. While there are still instances of overt discrimination today, the more common concern in today's society is the

unconscious discrimination characterized by less hostile, yet similarly harmful treatment driven by negative stereotypes and implicit bias (Banks, Eberhardt, & Ross, 2006). Unfortunately, this unconscious discrimination is inevitably present in the law enforcement community. Eberhardt, Goff, Purdie, and Davies' (2004) studies examined police officers' associations between black faces and criminality. In one of the studies, after being exposed to a set of black faces or white faces and asked, "Who looks criminal?" officers viewed more black faces than white faces as criminal. Additional findings revealed that black faces that were most stereotypically black were viewed as the most criminal (Banks et al., 2006).

As an African American male born and raised on the south side of Chicago, I grew up in communities plagued by drugs and gang violence. A relentless desire to succeed, along with a passion for martial arts, kept me away from those negative influences throughout my childhood. Despite this, my first direct experience with police officers was at the age of 14. This interaction was initiated with two handguns pointed at me along with commands to, "Get your hands up!" as I exited my home. This experience not only left me feeling violated, fearful, and helpless, but also with a resentment toward the law enforcement community despite the misunderstanding that caused this situation. Unbeknownst to me at the time, life would lead me to become a police officer 11 years later. Working in law enforcement changed my perspective of police officers. I came to realize the issues facing police as it relates to use of force were not solely a result of implicitly or overtly racist officers. While these certainly are factors, the quality of police training along with the officers' perceptions of various situations must also be considered as an area of exploration. I share these experiences because they are the driving force behind this dissertation. Exploring how the less-lethal force training can be reformed will make a significant contribution to changing the way officers handle these situations on the job. While there is

literature on best practices for police training from a criminal justice perspective, there is little information on approaches to police training from a martial arts and kinesiology lens that is also based on the perceptions of current police officers. Also, minimal scholarly research has been conducted on the perceived confidence (i.e., self-efficacy) police officers have regarding their ability to handle non-lethal, violent encounters. As a law enforcement officer, martial artist, and student of kinesiology, I believe connecting concepts from these three areas can reform the state of less-lethal force training for police officers in the United States.

1.3 Theoretical Framework

Social Cognitive Theory (SCT) was developed by Albert Bandura and derived from the Social Learning Theory. SCT is a theory of learning guided by triadic reciprocal determinism, which emphasizes how social, personal, and behavioral factors interact in the acquisition of knowledge (Bandura, 1986). Within this concept of triadic reciprocal determinism, the level of influence from one factor may vary in strength compared to other factors at different times. Self-efficacy, an important construct of SCT and a focal point of this study, has been extensively studied and applied in various fields over the past four decades. Self-efficacy is an individual's belief in their ability to produce a desired outcome in a specific situation (Bandura, 1997). Self-efficacy influences how well an individual learns, the activities they choose to engage in, the amount of effort they put forth, and how hard they persist when faced with adversity (Bandura, 1982, 1997). Additionally, it is enhanced with past performance accomplishments, vicarious experiences (i.e. social modeling), verbal persuasion, and how one interprets their physiological and mood states (Bandura, 1977b).

Several studies have assessed and found positive associations between self defense training and improved self-efficacy in women (Ball & Martin, 2012; David, Simpson & Cotton,

2006; Hinkelman, 2004; Hollander, 2004; Ozer & Bandura, 1990; Shim, 1998; Weitlauf, Cervone, Smith & Wright, 2001). However, minimal research has assessed the impact of defensive tactics training on a police officer's self-efficacy. Understanding an officer's self-efficacy toward protecting themselves in a violent encounter may lend insight toward refining approaches to training defensive tactics and subsequently improving the safety of our society as a whole.

Other constructs within SCT that will guide this dissertation include: self-regulatory skills, social support, behavioral capability, and outcome expectations. Self-regulatory skills allow one to manage behavior through self-monitoring, goal setting, and self-incentives (Bandura, 1997). Social support is a network of social influences that can aid, retard, or undermine efforts at personal change. Behavioral capability is one's possession of the knowledge and skill to perform an activity. An outcome expectation is a judgment of the likely consequence that performing a behavior will produce (Bandura, 1997). This particular group of SCT constructs, which are often used in physical activity promotion research, will be used to better understand and gain recommendations for reforming the less-lethal force training standards of police officers.

1.4 Specific Aims and Hypotheses

The aims of this study were twofold. First, a self-efficacy scale was developed specifically for assessing a police officer's perception of their ability to effectively protect themselves using defensive tactics. The scale was then used to explore the impact that police academy defensive tactics training has on self-efficacy with regard to an officer's preparedness for handling a non-lethal, violent encounter. This assessment was completed on recruit officers enrolled in a Basic Law Enforcement Training program (i.e., the Academy) at the University of

Illinois Police Training Institute before they began their training, upon completion of their training, and 6 months following their training. In the second part of my study, focus groups involving veteran officers were conducted to address the question of whether more defensive tactics training could positively impact police reform in preparation for situations that require less-lethal force.

For part 1 of my dissertation, it was hypothesized that: (1) the strength of the recruit officers' self-efficacy would be moderate before they begin training; (2) recruit officers with previous martial arts or self-defense training would have a baseline self-efficacy higher than the untrained group mean; and (3) recruit officers would have an overall increase in self-efficacy after the Academy training as well as after 6 months of police work compared to before the Academy. For part 2 of my study, the focus groups addressed the following research questions:

1. What are veteran officers' perceptions of the quality and quantity of the police defensive tactics training they receive?
2. How do veteran officers feel about police departments having a mandated, ongoing, in-service defensive tactics training program to increase officer safety and get regular practice handling less-lethal force situations?
3. What are veteran officers' perceptions of how personal experiences and departmental culture factor into the way less-lethal force situations are handled?
4. What are some recommendations veteran officers have for reforming police defensive tactics training?

CHAPTER 2: LITERATURE REVIEW

The proposed study evaluated the impact of police academy training on recruit officers' self-efficacy toward handling a non-lethal, violent encounter. Additionally, the perceptions of veteran officers were assessed regarding whether martial arts/defensive tactics programs can play a role in police reform when training for less-lethal force encounters. These studies were evaluated from the lens of the Social Cognitive Theory. This chapter will review relevant research from five areas: a brief history of police training and landmark use of force cases; andragogical approaches to police training; martial arts/defensive tactics training for police officers; physical fitness training for police officers; and Social Cognitive Theory.

2.1 Brief History of Police Training and Landmark Cases

Prior to 1959, there were no formal requirements for law enforcement training in any state (Ross & Jones, 1996). The 1970's brought about major reform in police training standards when the President's Commission on Criminal Justice Standards (1973) recommended a minimum of 400 hours of pre-service training for recruits in addition to 40 hours of in-service training for all police agencies in the United States. By 1990, over 90% of police agencies in the United States required pre-service training (Reaves, 1992; Ross & Jones, 1996). The critical necessity for enhanced use of force training within this new law enforcement culture was arguably solidified by three Supreme Court cases: *Tennessee v. Garner* (1985), *Graham v. Connor* (1989) and *City of Canton v. Harris* (1989).

The *Tennessee v. Garner* (1985) case involved a Memphis police officer that shot and killed a teenage boy who was fleeing from the scene of a burglary. This case led to the establishment of minimum standards for the use of deadly force by police officers. The Supreme Court held that, under the 4th Amendment, "law enforcement officers pursuing an unarmed

suspect may use deadly force to prevent escape only if the officer has probable cause to believe that the suspect poses a significant threat of death or serious physical injury to the officer or others” (Tennessee v. Garner, 471 U.S.1, 1985).

While Tennessee v. Garner (1985) gave police agencies a standard for handling deadly force situations, Graham v. Connor (1989) and City of Canton v. Harris (1989) provided insight and standards for both deadly force and less-lethal force situations. Less-lethal force is defined as “any use of force other than that which is considered deadly force that involves physical effort to control, restrain, or overcome the resistance of another” (National Consensus Policy on Use of Force, 2017).

The Graham v. Connor (1989) case involved an officer who detained, questioned and temporarily handcuffed a civilian after observing what the officer perceived as suspicious behavior. After confirming the civilian had not committed any crime, he was released. The civilian (Graham) later sued the officer for violating his rights and claimed he sustained multiple injuries from the incident. This case led to the establishment of an objective reasonableness standard for use of force. The Supreme Court held that proper application of reasonable force should be evaluated according to three factors: 1) the severity of the crime; 2) whether the suspect poses an immediate threat to the safety of the officers or others; and 3) whether the suspect is actively resisting arrest or attempting to evade arrest. Additionally, the Court held that a decision to use force “must be judged from the perspective of a reasonable officer on the scene, rather than with the 20/20 vision of hindsight” (Graham v. Connor 490 U.S. 386, 1989; Ross & Jones, 1996).

The case of the City of Canton v. Harris involved a woman who was in need of medical attention while in police custody but did not receive any. She subsequently sued the city of

Canton. During the trial, evidence revealed the shift supervisors responsible for making the decision to seek medical attention were not trained on the subject. Considering this, the Court held that a municipality can be liable for failing to properly train officers under circumstances where there is a “deliberate indifference” to the rights of the citizens officers come into contact with (City of Canton v. Harris, 489 U.S. 378, 1989). This case set a standard for the importance of continuous training along with the possible consequences when agencies fail to properly train their officers in the tasks they are required to perform. The “task” of particular interest for this dissertation is the use of less-lethal force, specifically, training for situations warranting unarmed defensive tactics.

2.2 Andragogical Approaches to Police Training

In approaching the task of training police officers, one concept that should be understood is the process of how adults learn, which is commonly known as andragogy. Knowles (1980) defined andragogy as, “the art and science of helping adults learn.” This definition was used to distinguish from, and compare to, pedagogy, which is the art and science of helping children learn. Andragogy can be explained using five underlying assumptions to describe the adult learner: 1) one who can direct their own learning and has an independent self-concept; 2) one who has accumulated sufficient life experiences to draw upon for learning; 3) one who has learning needs associated with changing social roles; 4) one who approaches learning as problem-centered and has interest in immediately applying the knowledge; and 5) one who is intrinsically, rather than extrinsically, motivated (Knowles, 1980; Merriam, 2001).

Many scholars propose research on transitioning police training from the traditional behavioral, teacher-centered approach to a more andragogical, student-centered approach (Birzer, 1999, 2003; Birzer & Tannehill, 2001; Marenin, 2004; McCoy, 2006; Vander Kooi &

Palmer, 2014; Werth, 2011). Traditionally, this behaviorist method includes learning in a uniform, structured environment without regard for individual learning differences, feelings, thoughts and experiences. Trainees are simply given knowledge and then expected to reproduce it behaviorally (Birzer, 2003; Birzer & Tannehill, 2001; Ramirez, 1996). Applications of the behavioral training methods in policing, such as in the “paramilitary model of policing”, has been a source of many issues within both the training environment as well as the departmental cultures (Birzer, 2003). According to the Bureau of Justice Statistics CLETA (2013), 48% of recruits were trained in the stress-based military model, which involved “intensive physical demands and psychological pressure.” In contrast, 18% of recruits were trained using more of a non-stress model, which focused on academic achievement, physical training, and supportive instructors, and 34% were trained using a balanced approach. Schlosser (2013) addressed the military-style of police training by noting, “We are not preparing our recruits to fight in combat with other soldiers. We are preparing adults to become community police officers alongside other similar officers and, frequently nowadays, working alone.” While the traditional approach has benefits in certain domains of police training (e.g., basic firearms training), and has even shown similar performance comparisons to the andragogical approach (Chappell, 2008; Vander Kooi & Palmer, 2014), incorporating principles from the adult learning model provide a more mission-oriented training program based in experience, critical thinking and problem solving. Additionally, academies that use an all or mostly non-stress training model, which is more consistent with the andragogical approach, have higher academy completion rates (CLETA, 2013).

Birzer and Tannehill’s (2001) research focused on the contributions of the andragogy model to train both novice and veteran officers using a student-centered approach, and how this

model would benefit officers by reinforcing the community-policing mindset. They recognized the value of behaviorist and cognitivist strategies in learning new mechanistic skills such as basic defensive tactics training. However, they argued the majority of police work involves responding to service calls that require problem solving, communication, and conceptual skills that are difficult to obtain via behavioral and cognitive approaches. These attributes, along with those required in the community-oriented policing approach (i.e. interpersonal skills, cultural diversity, conflict resolution, etc.), require a self-directed learning and problem solving focus that happens to be the main ingredient of the andragogical model (Birzer & Tannehill, 2001).

Chappell (2008) found similar performance outcomes for both the traditional and the andragogical approach to police training. She conducted a study comparing the academy performance of police recruits trained under a traditional basic curriculum in comparison to those trained under a new community-policing based curriculum called the Curriculum Maintenance System (CMS). The CMS differed from the traditional curriculum in the following ways: it focused on application as opposed to memorization; it utilized a problem-solving model addressing the elements of safety, ethics, community, understanding, response and evaluation; the learning was interconnected, interactive and scenario-based; new training materials were implemented; and a new exam was implemented that included application and knowledge questions. The study assessed 300 academy recruits from the state of Florida between 1998 and 2004, 155 under the traditional curriculum and 145 using the CMS. The significant findings in this study suggested that among the more highly educated recruits in each group, the recruits in the CMS group performed better than those in the traditional group in terms of average academy scores. Additionally, female recruits in the CMS group were more likely to secure employment

post-academy compared to the males. However, both the traditional group and the CMS group performed similarly overall (Chappell, 2008).

Werth (2011) analyzed a Problem-Based Learning Exercise (PBLE) developed by the Idaho Peace Officer Standards and Training (POST) staff. This PBLE was created based on adult learning theory along with others. The PBLE was designed to teach police recruits decision-making, problem-solving, multi-tasking and collaboration skills via scenario training that spanned the majority of the 10-week police academy. The training involved one large scale, progressive, mock investigation and several practical exercises, all of which required officers to respond to various locations, work in teams, use communication devices, interact with role players, and think critically to handle calls for service. Survey data were collected from the 10 academy classes that participated in the PBLE, which culminated in a response rate of over 92 percent ($N=413$). Over 80 percent of respondents either agreed or strongly agreed that PBLE helped them develop better problem solving, decision-making, conflict resolution, communication, officer safety, arrest techniques, command presence, and collaborative skills in the law enforcement field (Werth, 2011).

Schlosser (2013) used the andragogical training model by adopting a complete scenario-based training approach at the University of Illinois Police Training Institute (PTI) throughout the duration of the training academy in practically all areas of the curriculum, including use of force. The adult learning model at the PTI includes: progressive training, interconnected training, and scenario-based training. The progressive nature of the training allows recruits to have the ability to succeed as the training increases in complexity over time. Both the interconnected and scenario-based training allows officers to practice and apply their knowledge from various areas (e.g., criminal law, use of force, tactical communication) at the same time under realistic

circumstances such as a burglary scenario (Schlosser, 2013). The scenario-based training is a learning tool for both the officers who receive positive feedback and support from their peers as well as instructors, and the officers who watch the scenarios as they are being performed. It should be noted that the value of the progressive training model, the observational learning from scenario-based training, and social persuasion along with feedback, are all supported by Bandura's (1977) SCT research in regard to the resulting improvements in self-efficacy. This will be discussed in more detail in the SCT section.

The push for andragogical, scenario-based training in law enforcement has focused on improving the way conceptual skills (i.e., decision making, communication skills, etc.) are taught rather than mechanical skills (i.e., defensive tactics, firearms training, etc.). Yet this approach still has benefits in the realm of defensive tactics as it may aid in reducing the probability of officers allowing situations to escalate to the point where force is even necessary. Although officer safety training, as well as understanding various applications in use of force, has been incorporated into scenario-based training, officers must be physically prepared to protect themselves if alternative options are not available. The next section will address the contributions of martial arts training to police defensive tactics, its benefits, as well as content from basic defensive tactics curricula commonly used in Illinois.

2.3 Martial Arts/Defensive Tactics Training for Police Officers

The term, "martial arts", references many different systems of combat training that encompass various strategies depending on the civilization and place of origin. These strategies for combat include the use of designed and improvised weaponry, striking with various parts of the body, wrestling, joint locking, throwing, and/or ground grappling. Although Asia is often credited as being the birthplace of martial arts, possibly due to its significant popularity in the

Western world, martial arts actually dates back to writings and drawings on walls in ancient Egypt and Greece (Burke, Al-Adawi, Lee, & Audette, 2007; Rios, Marks, Estevan, & Barnett, 2018). Police defensive tactics (DT) techniques are derived from a blend of various styles of martial arts. DT training includes all forms of less-lethal use of force options such as come-along holds, manual restraints, unarmed self-defense, pepper sprays, impact weapons, and electronic control devices (National Consensus Use of Force Policy, 2017). While martial arts training can be practiced for various purposes, including combat, sport, self defense and self-exploration (Burke et al., 2007), the overall objective of police DT is to apply the minimum force necessary to gain control of a subject. The primary focus within this dissertation, in relation to DT, will be on the use of unarmed self-defense and manual restraint tactics along with the fitness needs associated with these tactics.

As previously stated, martial arts training has had a direct influence on police DT from a technical standpoint since its onset. However, one area of martial arts that scholars have pushed for embedding more deeply into police DT are the philosophies and psychological benefits that guide traditional martial arts. Traditional styles, particularly those from East Asia such as Aikido, Kung Fu, Karate, Judo, and Tae Kwon Do, are generally known for coupling the physical skills with the development of the mind and the spirit (Rios et al., 2018).

This philosophy found in East Asian martial arts has origins in both Daoism and Zen Buddhism (Allen, 2014). The spiritual teachings emphasize the lifelong practice of self-cultivation and physical development. A critical component for effectively using martial arts training, including for law enforcement purposes, is the devotion of time to working on the skills and knowledge required to make the techniques work (Allen, 2014).

In addressing research on issues regarding lethal force and racial bias in law enforcement, Lee (2016) proposed that police officers should be required to engage in regular, ongoing traditional martial arts training such as Karate, Tae Kwon Do, and Kung Fu. Lee (2016) specifically distinguished traditional styles as the recommended option, as opposed to mixed martial arts (MMA), for the added benefit of the philosophical and psychological principles in traditional martial arts. One example in Daoism, which has philosophies borrowed by traditional martial arts, is the principle of non-contention. This principle teaches the value of refraining from violence and praises the mastery it takes to become impossible to provoke (Allen, 2014). Several reasons were addressed for this proposal including: regular training would give officers the confidence to handle a violent encounter without quickly resorting to their firearms; the training would provide stress relief; and it would promote mental and emotional stability. Lee (2016) noted while officers generally receive approximately 44 hours of defensive tactics training at the police academy, “regular and sustained practice” is necessary for officers to effectively execute any techniques during an encounter on the street.

Martial arts styles are generally categorized as either hard or soft. “Fast, vigorous and dynamic movements aimed at generating and transmitting the maximum force possible to the striking surface” characterize a hard, or external, style. Soft, or internal, styles, by comparison, are characterized by “smooth, relaxed movements often executed very slowly, aiming at the regulation of posture during the production of movements” (Gorgy, Vercher, & Coyle, 2008; Rios et al., 2018). Soft martial arts also have considerable value to law enforcement officers, particularly females and smaller framed males, because they do not require strength (Allen, 2014). Examples of soft styles of martial arts used by law enforcement are Japanese Jujutsu, Aikido, and Brazilian Jiu-jitsu. The focus on proper technique and leverage gives officers a way

of controlling a subject and escaping from various controls without using strikes as is common in hard styles.

The reasons behind Lee's (2016) proposal for police to train in traditional martial arts were supported by findings from Rios et al.'s systematic review (2018). Rios et al. (2018) systematically reviewed 28 quantitative studies between 2001 and 2016, assessing the health benefits of hard styles of martial arts in adults. The majority of these studies involved participants with little or no martial arts experience. The participants in the studies ranged from young adults (at least 18 years of age) to older adults (over 60 years of age). Regarding cognitive function, Rios et al. (2018) concluded that while the number of studies is limited, findings from the review show that hard styles of martial arts may aid in preventing age-related cognitive decline. Regarding the psychological effects, Rios et al. (2018) concluded that although there were weaknesses in design for some of the studies, martial arts training might have positive effects on self-confidence, self-discipline, and mood, which may aid in reducing depression. These cognitive and psychological effects from martial arts training have the potential to significantly benefit police officers, not only in regard to handling less-lethal force situations, but also in coping with the inherent stress associated with the career.

Kaminski and Martin (2000) conducted one of the first large police perceptions studies analyzing their satisfaction with their DT and control tactics training. The authors surveyed 601 officers from a large police department on the West Coast. The survey instrument consisted of a variety of questions including the types of training officers received both internally and externally, opinions about the effectiveness of the training, and perceptions of the quantity of the training provided. The results indicated the following: most officers agreed that the arrest and control tactics were easy to learn (72%) and remember (54.5%) but less than a third (31%)

agreed they were easy to apply to resistive subjects; fewer officers felt the unarmed DT training was easy to learn (58.6%) and remember (46.4%); nearly half (47.1%) of the officers felt the quantity of arrest and control tactics was adequate while only 30.5% felt the quantity of DT training was adequate; out of 69% of officers who reported being assaulted on the job, 58.3% felt their department did not adequately prepare them for the encounter; officers expressed high levels of interests in more training on takedowns (79%), wrestling techniques (83%), and striking techniques (88%). A particularly noteworthy result within the context of this dissertation was that 51% of officers studied other self-defense or martial arts training methods on their own time and all but two officers stated the training assisted them in making arrests or defending themselves. This indicated a much higher level of satisfaction the effectiveness of outside martial arts/self defense training than departmental training (Kaminski & Martin, 2000).

Ellifritz (2013) also conducted a study focusing on unarmed self-defense and control tactics, which examined how much training officers actually received as well as their perceptions of that training. The participants, who were officers from several suburban police agencies in Ohio, completed a survey evaluating multiple items including the amount of DT training they received in a year, their attitudes toward training, and their confidence levels with using the training received. Some of the significant findings in this study included: about half of the officers mentioned they had been involved in a situation on duty where they wished they had better DT training; officers reported they received an average of only 6.78 hours of DT training the previous year, yet they believed their agencies should provide an average of 28.71 hours of DT training per year to insure proficiency; the majority of officers mentioned overtime, scheduling, and lack of legal requirements for training as issues affecting the amount of training they receive; and despite their reported need for more training, their confidence levels in their

DT skills were “extraordinarily high” (Ellifritz, 2013). Perhaps the most significant results in the study were that officers felt they needed more DT training and the more training officers received (by the department or off duty), the more confident they were in their abilities with handling situations (Ellifritz, 2013). This study supports Allen’s (2014) theory that a devotion to training time is a critical component to effectively using martial arts (and invariably, police defensive tactics).

Several studies have also explored the psychological factors (e.g. pressure and anxiety) impacting police performance in use of force. Nieuwenhuys, Caljouw, Leijsen, Schmeits, and Oudejans (2009) developed a scale for measuring skill performance on five arrest and self-defense skills commonly used in the line of duty. The authors conducted two experiments: the first experiment satisfactorily tested the scale on inter-rater and intra-rater reliability with 14 police instructors; the second experiment tested the validity of the scale using the performance of 19 police officers in executing the arrest and self defense skills under both high pressure and low pressure conditions. The scale was found to have good external and concurrent validity and the results indicated officer performance suffered under pressure (Nieuwenhuys et al., 2009).

Renden, Landman, Savelsbergh, and Oudejans (2015) conducted a study on how Dutch police officers perceived their ability to handle violent encounters and their preparation for using arrest and self-defense skills. The results indicated that additional martial arts training and on the job experience was associated with perceptions of better performance, but anxiety negatively impacted performance and officers felt the skills taught and the frequency of training needed improvement (Renden et al., 2015).

Renden, Savelsbergh, and Oudejans (2017) followed up on the previous study by using simulated high-pressure arrest scenarios to compare a regular police arrest and self-defense

training to reflex-based self-defense training. In this crossover design study, the officers' performance only improved after the reflex-based training. The improvements obtained in the reflex-based training were attributed to the focus on situational awareness, de-escalation and anticipation of possible attacks, and using physical defensive skills based on their primary reflexes. The results provided more support for the need to improve the current training received by officers in this study, along with the potential value of reflex-based training for all officers (Renden et al., 2017).

Schlosser and Gahan (2015) conducted a study analyzing police use of force among Illinois police officers. In this online survey, 291 officers of various experience levels and department sizes responded to questions regarding the types of force tactics they used to make arrests. The results indicated: most arrests only require officers to use their communication skills; when physical force is necessary, officers are more likely to use control holds and takedowns than their less-lethal weapons (i.e. OC spray and TASER); over half of the officers reported they rarely or never used their baton for control or as a striking tool; and larger departments were more likely to have back-up units while smaller departments were more likely to be issued a TASER as a force option. Additionally, officers reported many of their arrest attempts end up on the ground when dealing with active resisters and aggressive assailants, indicating a need for more emphasis on ground control based training (Schlosser & Gahan, 2015).

While DT training program designs vary by academy, region, and department, the standard curricula generally focus on either striking techniques with control positions or ground techniques with control positions. For example, the Police Training Institute Arrest and Control Tactics base curriculum includes standing control positions and takedowns, handcuffing tactics from various positions, pressure points, weapon retention, and ground defense tactics. While this

curriculum does not place emphasis on stand up striking techniques, the ground defense techniques are quite extensive in that they include: tactics for safely getting up from the ground, tactics for getting past a subject's legs on the ground, escaping from the bottom while being mounted, and submissions from the bottom if someone is between the officer's legs grabbing their weapon (Schlosser, 2013). The Human Factor Research Group's Pressure Point Control Tactics/Threat Pattern Recognition base curriculum, which is taught by the majority of the Mobile Team In-Service Training Units (Illinois Law Enforcement Training and Standards Board), has similar theories but they do not place emphasis on ground techniques. Instead, they focus on defensive counter-striking techniques, which include: palm heel strike, straight punch, suprascapular stun, front thrust kick, angle kick, knee strike and 4 brachial stuns (Siddle, 2017). Although the names for the above techniques vary across defensive tactics and martial arts systems, the general application of the techniques remain the same. Considering the Police Training Institute and the Human Factors Research Group are both prominent organizations in the police training industry, it can be inferred that both striking-based tactics and ground-based tactics play important roles in the overall development of police officer DT training.

Hough (2017) published an article on addressing a study done by the Florida Department of Law Enforcement in 2016 on the DT curricula of police officers, correctional officers, DT instructors and probation officers. Key findings in this study indicated: approximately 50% of participants stated the recruit Academy training was adequate and they felt confident in using the techniques they learned; the majority of participants agreed that annual in-service DT training (post Academy) was not enough for officers; ground fighting/grappling was the main tactic participants felt would be most helpful; and training should focus more on "real-life simulation" and emphasize skill repetition with fewer techniques (Hough, 2017).

O'Neill, O'Neill, Weed, Hartman, Spence, and Lewinski (2019) analyzed the defensive tactics training approaches of 3 large police academies in the United States. The study consisted of 3 experiments examining the content and effects of single session and block training, spaced sessions with scenario-based feedback and small-group practice, and block training with scenario-based feedback along with performance feedback. The results revealed limitations in the single session or block training structure in comparison to the spaced sessions with scenario-based practice. Additionally, the effect of performance feedback was observed with increases in skill performance, and the value of consistent follow up practice was observed as performance declined post graduation in the groups that received fewer follow up skill tests.

Another area of police training that will be reviewed next is physical fitness training for the general occupational tasks of policing, for martial arts/defensive tactics, as well as from the perspectives of officers.

2.4 Physical Fitness Training for Police Officers

Careers in law enforcement generally require a reasonable level of physical fitness to effectively carry out regular duties, including handling physical encounters. Caspersen, Powell, and Christenson (1985) measured physical fitness in two areas: health-related fitness and skill-related fitness. The health-related fitness components include: cardiorespiratory endurance, muscular endurance, muscular strength, body composition and flexibility. The skill-related fitness components include: agility, balance, coordination, speed, power, and reaction time (Caspersen et al., 1985). Although strength and endurance are considered the most accepted factors for meeting the demands of police work (Arvey, Landon, Nutting, & Maxwell, 1992; Maher, 1984), an ideal physical fitness curriculum designed to serve the needs of law enforcement officers should influence all areas of health- and skill-related fitness groups. While

officers spend many hours doing sedentary activities while on duty, the unpredictability of the job often require them to transition from low intensity tasks to maximal physical exertion in a matter of seconds (Bonneau & Brown, 1995; Lagestad, 2011b; Lagestad & Tillaar, 2014).

Examples of these circumstances include a foot pursuit, carrying injured civilians, and fights in progress.

Wilmore and Davis (1979) conducted one of the first studies on physical fitness training for police officers. In the study, they found that the handling of a simulated arrest situation correlated with general physical fitness and job-specific tasks. Dillern, Jenssen, Lagestad, Nygård, and Ingebrigtsen (2014) conducted a similar study many years later to examine if an officer's general fitness affects their ability to control a live struggling subject during an arrest simulation test. They also found a positive correlation between physical fitness and the arrest simulation test. Additionally, they found muscular strength, specifically in the pectoralis major (chest) and latissimus dorsi (back) muscles, was a particularly important fitness component in handling a struggling subject. Power was also mentioned to gain relevance with sudden rapid increases in resistance and movement (Dillern et al., 2014).

Arvey, Landon, Nutting and Maxwell (1992) suggested that strength, along with endurance, underlie both performance in police work and in physical ability tests used to screen police officer applicants to determine their fitness level. They also validated the effectiveness of physical ability tests at screening applicants using the construct validity approach. The tests they chose to include in the selection battery were chosen based on job task analyses and practical traditional measures believed to improve job performance. The tests included the following: a 100 yard dash; dummy drag; obstacle course; grip strength; dummy wrestle; sit-ups; bench dips; and a 1-mile run (Arvey et al., 1992). After gathering data from 5,500 law enforcement agencies,

Collingwood, Hoffman and Smith (2004) found the following physical tests to be job related: 1.5 mile run; 300-m run; bench press; push-up test; 1-min sit up test; vertical jump; and the Illinois agility run. The characteristics of these physical ability/fitness tests were still consistent with the focus on strength and endurance, with added elements of power and agility.

Beck, Clasey, Yates, Koebke, Palmer, and Abel (2015) analyzed the physical fitness requirements unique to campus police due to the young population they serve and the physical environment. They had a sample of incumbent officers complete a timed officer physical ability test (OPAT) designed to simulate police job tasks. The OPAT started with the subject seated in a chair (to simulate a patrol car) before completing several tasks including: running up and down stairs; gaining entry into a building; climbing over and crawling under barriers; dragging a weighted mannequin; and sprinting in full tactical gear. The physical fitness characteristics tested and used for analysis in the study included body composition/anthropometrics, aerobic capacity/cardiorespiratory endurance, muscular strength and endurance, flexibility, agility and power. When these characteristics were analyzed in relation to the officer's OPAT results, the findings suggested aerobic capacity (measured by VO_{2peak}), muscular endurance, and agility were the most important attributes for performing physical law enforcement tasks. It should be noted, however, that Beck et al. (2015) believed strength and power were not correlated only due to the fact that defensive tactics and grappling were not assessed in the OPAT tests. If this area of police work were assessed, it is believed a strong correlation with strength and power would be observed.

Dawes, Kornhauser, Crespo, Elder, Lindsay, and Holmes (2018) conducted a study investigating the influence of body mass index (BMI) on physiological and perceptual demands related to defensive tactics training in state police officers. A sample of 24 male highway patrol

officers were split into two groups, a healthy group and an overweight group based on BMI, and individually completed a Defensive Tactics and Arrest Control (DEFTAC) Gauntlet Drill wearing full uniform and duty gear. The objective was to evaluate the officer's physical and cognitive abilities during the performance of mandated techniques under stress. The gauntlet included 50 straight punches into a punch shield, defense against an overhead knife attack, 30 front kicks into a kick shield, holstered handgun retention, 30 knee strikes into a pad, defense against an overhead blunt-object attack, a technical stand up into the "defensive recovery position", a handgun disarm, and handcuffing from the prone position. Four DEFTAC subject matter experts set up the gauntlet in stations where officers ran from one to the next and the entire event was timed and evaluated. Officers provided height and weight measurements, pre and post blood lactate samples, and were given heart rate (HR) monitors to estimate exercise intensity during the intervention. The results indicated that the average HR range for the DEFTAC training ranged between 82-100% of their age-predicted maximum heart rate, which was consistent with a reliance on aerobic and anaerobic energy systems. Additionally, the overweight group had higher average and peak HRs (not statistically significant), increased blood lactate levels post event but at lower levels compared to the healthy group, and obtained a lower DEFTAC score than the healthy group. The lower blood lactate levels in the overweight group were predicted to be a result of reduced effort during the drill as evidenced by their slightly lower RPE ratings. These findings indicated officers should maintain healthy BMI ranges for optimal health and work performance, and focus on improving their anaerobic capacity (Dawes et al., 2018).

The majority of the studies above consider strength to be an important component of fitness for law enforcement related duties. Power, which is related to strength, is additionally

noted as another important element, particularly in a physical encounter. Power, or explosive strength, becomes increasingly critical in physical encounters involving striking (Chaabene, Hachana, Franchini, Mkaoue, & Chamari, 2012).

Power can be defined in a variety of ways, such as the product of force and velocity, work output over time, and the product of force and distance over time (Kawamori & Haff, 2004; Newton & Kraemer, 1994). Resistance training is generally accepted as the primary mode of developing high power outputs, particularly through explosive movements. Some general factors that contribute to explosive power include: rate of force development, muscular strength, training load, coordination of movement and skill, and the stretch-shortening cycle. One important concept to note is that training these factors in isolation while focusing on areas of weakness produce the greatest benefit (Kawamori & Haff, 2004; Newton & Kraemer, 1994). Harris et al. (2000) conducted a study where subjects trained for 9 weeks starting with 5 weeks of heavy resistance with low velocity followed by 4 weeks of low resistance with high velocity training. When compared to the individual approaches, the results suggested that combining training methods while starting with the maximal strength development approach (heavy resistance with low velocity) produced more optimal performance gains (Harris et al., 2000).

While understanding the factors contributing to power development is important, knowing the best exercises of training for power production also has benefits for officers interested in developing power for defensive tactics. According to McBride, Triplett-McBride, Davie & Newton (1999) and Haff, Whitley, and Potteiger (2001), the primary explosive exercises that can improve power production are Olympic-style lifts and various squats. This includes exercises that use the stretch-shortening cycle, such as the snatch (squat and power),

clean (squat and power), pulls (clean and snatch), jerks (push and split), jump squats and speed squats.

With an understanding of factors that contribute to power production, officers can use this information to develop the attributes necessary to prepare their bodies for the physical demands of a hostile encounter. A valuable addition to this knowledge is understanding how striking-based martial artists utilize and produce power while fighting.

Many athletic movements rely on power to enhance performance (Kawamori & Haff, 2004). This includes martial arts and self-defense based activities, which make resistance and explosive training an important element in improving the effectiveness of defensive tactics techniques. An effective method of learning to best enhance the attributes necessary to develop the techniques is to study martial artists who actively use them against live, resisting opponents.

According to Chaabene et al. (2012), effective performance of karate techniques is dependent on contraction velocity rather than muscle strength. Additionally, maximal velocity and explosive strength are the main determinants of a karate practitioner's muscle mechanical factors. It was also noted that success in fighting in karate competition, which involves a non-compliant adversary (just as in a real altercation), is dependent on muscular explosive power in both the upper and lower limbs (Chaabene et al., 2012). Therefore, in terms of technique application, with karate being a striking based art, it can be inferred that officers should develop these same attributes to effectively use in striking based DT.

While, as previously discussed, resistance training is certainly beneficial to strength and power development, the muscular power, strength and even flexibility adaptations possessed by martial artists seem to derive from repetition of the techniques trained within the style (Loturco, Nakamura, Artioli, Kobal, Kitamura, Cal Abad, Cruz, Romano, Pereira & Franchini, 2016;

Probst, Fletcher, & Seelig, 2007). Another striking based art/sport that makes a major contribution to understanding how to develop power in technique is boxing. Loturco et al. (2016) noted that to achieve maximal impact, a boxer's punch requires the ability to transfer the momentum of force from the legs to the arms. This concept implies that when punching, developing the leg muscles may be just as, if not more, important than the arms in terms of maximizing impact force. In fact, Lenetsky et al. (2013) recommended that a focus on lower limb strength and power be considered with the development of core stability and upper limb velocity to improve punching force.

Loturco et al. (2016) also noted from previous research that vertical jump ability is related to punching acceleration and impact (Loturco, Artioli, Kobal, Gil & Franchini, 2014). Loturco et al. (2016) showed findings with boxers that were consistent with the Loturco et al. (2014) findings on karate athletes regarding the important influence that squat jumps and counter movement jumps have on punching impact. Of particular importance to police defensive tactics training, it was suggested that plyometric exercises be included in any training routines that aim to enhance an elite striker's "fighting-specific neuromechanical capacities" (Loturco et al., 2016; Ramirez- Campillo, Andrade & Izquierdo, 2013).

Despite a fair amount of research on fitness training for law enforcement and exercises that are ideal for the occupational tasks of officers, some incumbent officers do not value its quality or importance within their agencies. The Texas Commission on Law Enforcement Officer Standards and Education (TCLEOSE, 2000) conducted a survey on over 800 agencies that included questions regarding officers' perceptions of the fitness standards and core competencies in policing. They found 69% of respondents believed the entry-level police fitness standards needed to be improved and 71% of respondents believed the continuing service fitness

standards needed improvement. Additionally, only 0.9% of the respondents considered physical ability to be critically important to the job and it was ranked last among the ten competencies assessed, with integrity, self-control and dependability being the first three (TCLEOSE, 2000).

Bissett and Snell (2008) conducted two series of focus groups on police chief administrators ($N=5$) and front-line patrol supervisors ($N=10$) regarding their perceptions on the importance of physical ability for police officers. Overall, the supervisors placed more importance on physical ability than did the chief administrators, although the administrators did not specifically denounce the importance of physical ability in law enforcement. The chiefs unanimously ranked physical ability last among other competencies such as self-control, situational reasoning, and interpersonal skills. They noted that using these other competencies would reduce the need for physical abilities because a confrontation would be less likely to occur. However, the supervisors had mixed opinions regarding where physical ability would be ranked on the list of competencies as many considered all characteristics listed to be important. Both chief administrators and supervisors agreed that establishing departmental fitness standards were beneficial and necessary although departments must accommodate for their diverse needs. It was also noted that mandatory standards were more likely to improve the overall health of police officers than voluntary programs (Bissett & Snell, 2008).

Bissett, Bissett and Snell (2012) conducted another study assessing police officers' ($N=250$) perceptions of the fitness standards and physical agility tests for law enforcement using a 58-item questionnaire. Regarding physical agility testing, 90% of incumbent officers believed it was important at hire, however, the majority of the officers did not favor mandatory physical testing of any kind for incumbent officers. In fact, 27% of incumbent officers admitted they could not pass a physical agility test. As in the previous studies, the officers also ranked fitness

and agility as less important than other competencies required for policing and they noted the police tasks requiring fitness and agility were relatively infrequent in comparison to other competencies (Bissett et al., 2012).

This research lends valuable insight into how officers may prepare themselves physically to enhance the attributes necessary to improve their DT skills and how they perceive the implementation of physical fitness testing standards. In the next section, I will review literature on SCT with emphasis on its relation to the impact martial arts/defensive tactics training has on self-efficacy.

2.5 Social Cognitive Theory

The theoretical framework for this dissertation, Social Cognitive Theory (SCT), is a theory that addresses the reciprocal interaction of social, personal, and behavioral factors in the acquisition of knowledge and skill (Bandura, 1977; 1986; 1989). For example, a new officer engaging in police academy defensive tactics training (behavior) may lead him or her to have increased self-defense efficacy (personal), which could result in their comfort with entering dangerous, high crime areas (social) and physically engaging criminals when appropriate. While there are many constructs in SCT, the areas of focus in this dissertation are self-efficacy, self-regulatory capability, social support, behavioral capability, and outcome expectations.

Self-Efficacy Theory

Research involving our self-reflective capabilities, more specifically self-efficacy, will offer foundational literature regarding its impact on behavior in various physical activity related domains, including martial arts training. Self-reflective capability is an individual's ability to change their way of thinking after analyzing their experiences and thinking through their own thought processes. This analytical process involves various modes of thought verification to

confirm the validity, reality and value of one's thoughts (Bandura, 1989). Self-efficacy is a type of self-reflection that influences behavior, including what actions people choose to take, the amount of effort they invest, and how hard they try when faced with obstacles and failed experiences. The most important method of developing self-efficacy is through mastery experiences; success in performing a behavior builds personal efficacy while failure reduces it. Self-efficacy can also be improved by observing and comparing one's performance to others' experiences, social persuasion in conjunction with positive feedback in accomplishing in small, progressive tasks, and having a positive physiological/emotional state while performing a skill (Bandura, 1977; Bandura, 1986). Though self-efficacy research is scarce in the police use of force domain, many studies have been conducted in the areas of martial arts and self-defense with regard to its impact on self-efficacy.

Madden's (1990) study supported the psychological benefits of karate training for both men and women. Forty-one male (54%) and female (46%) college students who had enrolled in four karate courses over four spring semesters participated in the study. The material taught in the course included basic punches, kicks, blocks, kata (forms), training drills, physical conditioning, and martial philosophies. The pre-test and post-test survey consisted of 10-point scales rating multiple items including: degree of control over being attacked and being injured in an attack; vulnerability to being attacked and having bad things happen; likelihood of being attacked and of being injured in an attack; and likelihood of resisting an attacker. In addition, a standardized depression measure was administered. The results indicated both male and female participants were less depressed, felt they had better control over being attacked, better control over being injured if they were attacked, less vulnerability to being attacked and having bad

things happen, and less likely to be injured in an attack after the semester-long karate course (Madden, 1990).

Another martial art that has received significant attention in self-efficacy research is Taiji (also pronounced Tai Chi). Taiji is an internal Chinese martial art aimed at strengthening and relaxing the mind and body in addition to improving self-defense. Multiple studies have found positive effects of Taiji on general self-efficacy (GSE) (Dechamps, Gatta, Bourdel-Marchasson, Tabarin & Roger, 2009; Dechamps, Quintard, & Lafont, 2008); and domain-specific self-efficacy (Li, Fisher, Harmer, & McAuley, 2005; Li, Harmer, McAuley, Fisher, Duncan, & Duncan, 2001a; Taylor-Piliae & Froelicher, 2004). Nedeljkovic, Wepfer, Ausfeld-Hafter, Wirtz, and Streitberger (2013) conducted a randomized controlled trial on the effects of Taiji training on general self-efficacy and perceived stress. They investigated whether increases in GSE reduced and mediated perceived stress following Taiji training. Seventy healthy participants aged from 18 to 50 years were randomly placed in either a 12-week Taiji intervention group comprising two classes per week, or a waiting list control group. All participants completed a Perceived Stress Scale (PSS) and GSE scale before, shortly after, and two months following the intervention to assess perceived stress and self-efficacy. The PSS scale is a 10-item self report questionnaire using a five point Likert scale to assess a participant's cognitive evaluation of stressfulness of situations experienced in the past month of their life. The GSE scale is a 10-item scale using a four point Likert scale assessing one's perceived self-efficacy in an effort to predict coping with daily issues and adapting after experiencing stressful life events. The results of the study indicated that regular Taiji practice significantly increased GSE and decreased perceived stress in comparison to the control group. Additionally, the increase in GSE significantly mediated the observed reduction in perceived stress (Nedeljkovic et al., 2013). In general, as

illustrated in the line of Taiji research studies, traditional martial arts based self-efficacy studies seem to emphasize an interest in assessing self-efficacy improvements in areas outside the domain of self-defense.

Ozer and Bandura (1990) conducted one of the first studies assessing the impact of self-defense training on self-efficacy. Female participants ($N=43$), aged 18 to 55 years old, who were enrolled in an ongoing community self-defense program were used in the study. A three phase, staggered, intragroup control design was used to provide a baseline for evaluating the effects of the program. In the control phase, half the subjects were pre-tested using the measurement procedures twice before the self-defense training to determine if there were any naturally occurring non-treatment effects or reactive effects on behavior resulting from the measurement procedures. The other half was pretested once before the self-defense intervention. The treatment phase consisted of five 4.5 hour-long sessions over a period of five weeks followed by a post-test of the measurement procedures. A mastery-modeling program was used to teach the women how to defend against a sexual assault with emphasis on creating mastery experiences in graduated steps through simulated assaults. Other sources of information to aide in coping self-efficacy presented in the intervention were vicarious participation and verbal persuasion from the other subjects while a given subject was participating in simulated assaults. In the final follow-up phase, participants were retested on the measurements procedures after a 6-month follow up period. The measurement instruments in this study included: self efficacy scales for coping efficacy (interpersonal, activities, and self defense) and cognitive control efficacy; questionnaires related to negative thoughts about sexual assaults, perceived risks and vulnerability to sexual assault, anxiety arousal over the possibility of sexual assault, and participant and avoidant behavior. Additional informational tests included a behavioral test of self-protective skill

administered via simulated assaults and an assessment of past experience with physical and sexual assaults. The results of the study indicated the mastery modeling based self-defense program improved perceived coping efficacy, cognitive control efficacy, and participant behavior (i.e., freedom of action). Additionally, the program intervention resulted in decreased anxiety arousal, negative thoughts, avoidant behavior, and perceived vulnerability. Despite a small, yet statistically significant, decline in perceived self-defense efficacy, the overall self-efficacy was maintained through the follow up period (Ozer & Bandura, 1990). Although female subjects were the demographic of interest, these findings contributed valuable insight to the diverse effects of mastery modeling on empowering others specifically in the physical activity domain.

Since Ozer and Bandura's (1990) study, several additional studies have assessed and found positive associations between self defense training and improved self-efficacy in women (Ball & Martin, 2012; David, Simpson & Cotton, 2006; Hinkelman, 2004; Hollander, 2004; Shim, 1998; Weitlauf, Cervone, Smith & Wright, 2001). Ball and Martin's (2012) research was particularly notable because they conducted a study examining the effectiveness of self-defense training versus traditional martial arts on altering multidimensional self-efficacy and fear in comparison to a stress-management training program. They were specifically interested in assessing self-efficacy for dealing with sexual victimization. Sixty-nine female participants, who were enrolled in one of three 8-week Midwestern university courses, were used in this study. The course options were modern self-defense training (MSDT), karate (TMA), or stress management (SM). The two main scales Ball and Martin (2012) used for assessment were Ozer and Bandura's (1990) multidimensional self-efficacy scales to assess perceived coping capabilities for self-defense efficacy, activities self-efficacy, and interpersonal self-efficacy, and the Perceptions of

Dangerous Situations Scale (Hughes, Sherrill, Myers, Rowe & Marshall, 2003) to measure fear. The results indicated that the MSDT group had significantly higher self-defense efficacy ($M=8.1$) scores than the TMA group ($M=6.4$) and significant reductions in life-threatening fear ($M=3.9$) than the TMA group ($M=4.4$). These results supported the value of MSDT training over TMA in helping women improve self-efficacy and reducing fear in handling a self-defense encounter.

Morales-Negron, Eklund, and Tenenbaum (2011) conducted a study on the self-defense efficacy, teaching combatives self-efficacy, combatives state anxiety, and motivation in 52 U.S. Army soldiers before, during and after attending Instructor Combative Training courses. Several scales were used for measuring multiple variables including the Situational Motivation Scale (SMS), Self-Determination Index (SDI), Martial Arts Self Efficacy Scale (MASES), and State Anxiety Rating Scale (SARS). During the course, the intervention group received additional instruction in anxiety coping strategies during two daily 20-minute sessions, while the control group received no additional instruction. The results of the study displayed an increase in combative and teaching self-efficacy for both groups, although the intervention group demonstrated higher self-defense efficacy during the stress inducing fighting scenarios and competitive environment of the final two days of training. This supports Bandura's theory on the impact of one's physiological state on self-efficacy. The state anxiety in combatives increased for both groups during day 4 (which included practical self defense scenarios); however, the intervention group showed significantly lower anxiety scores than the control group. While there were no significant pre-training intrinsic motivation differences between the groups, the intervention group showed significant increases in intrinsic motivation to self-determine

behavior throughout the training, as the control group remained relatively stable (Morales-Negron et al., 2011).

Self-efficacy, along with other constructs, has also been used as a theoretical basis in many studies to design intervention programs and initiatives within the physical activity domain. For example, Garrin (2014) used a theoretical framework combining characteristics from self-efficacy, self-determination and self-regulation to promote behavioral and social change in fitness professional-client interactions. One area of particular interest was the potential social change outcomes associated with self-efficacy. As behaviors change as a result of practice or exposure, clients may have increased levels of self-concordance, which is “an enhanced capacity for acting in alignment with personal interests and desires” (Astin & Astin, 1996; Garrin, 2014). The clients may also develop a desire to support the broader community in achieving behavioral changes as they self-reflect on their transformation and perceived mastery of a skill. This leads to collaborative efforts in seeking interactions with others who have a common purpose, leading to coalition development and team building (Astin & Astin, 1996; Garrin, 2014). This kind of dynamic would be an ideal circumstance for any program intervention, including training standards within police departments.

Studies on SCT Constructs

Similar to self-efficacy, while there are many studies involving various SCT constructs, few assess police use of force and defensive tactics. There are some studies that used Akers’ social learning theory (which has similarities in origin to SCT) to assess police misbehavior and excessive force. Chappell and Piquero (2004) conducted a study on whether social learning theory could be used as a predictor for police deviance. They analyzed survey data from a random sample of 499 officers in the Philadelphia Police Department, assessing police

misconduct by the presence of citizen complaints. The social learning concepts were measured using five hypothetical scenarios assessing police integrity by rating the seriousness of certain acts from their own perspective and from the perspective of their peer officers. The authors found that officer attitudes and officer behaviors were linked; meaning their attitudes toward certain behaviors may actually translate to how they behave while on the job. Specifically, regarding officer attitudes about excessive force, they found that this was correlated with the number of citizen complaints more so than other variables such as theft and accepting gifts. Overall, Akers' theoretical framework provided a useful theoretical lens for viewing police misconduct.

Maskaly and Donner (2015) conducted a study integrating the social learning theory (SLT) with the terror management theory (TMT) to attempt to explain police shootings of unarmed suspects. They addressed how each of the four SLT concepts (i.e. differential associations, definitions, differential reinforcement, imitation) work to create a police subculture that teaches and reinforces police behavior. These behaviors may be negatively strengthened by a subculture of aggressive, authoritative personalities (Cochran & Bromley, 2003), modeling influences passed down from field training officers to novice officers, and contrasts of negative reinforcement from upper management with positive reinforcement from peers for the same behavior. TMT posits that humans deny the reality of their own mortality and adopt a cultural worldview to create value to their lives and ultimately distract themselves from the thought of dying. Regarding the integration of these theories, Maskaly and Donner (2015) argue that TMT works as an ancillary process to SLT in that SLT explains how police subculture teaches that violence is normative in certain situations, while TMT explains how subculture serves as a worldview for police. Additionally, officers receive mortality salience primes through constant

reminders via training, peers, and media among others, of the possibility of their death resulting from the nature of their job. This forces the officer to defend his worldview and seek security by annihilating any threat to his or her worldview. Due to the subculture's emphasis on the use of weapons and aggressive means of ensuring officer safety throughout the training process and within the department, officers are likely to default to these tactics as a solution to resolving a threat to their worldview (i.e., instinctively shooting an unarmed suspect during a tense situation).

Bandura's SCT constructs have been used for physical activity and health interventions in many studies across various populations (Joseph, Daniel, Thind, Benitez, & Pekmezi, 2016; Young, Plotnikoff, Collins, Callister, & Morgan, 2014). In a meta-analysis by Young et al. (2014), 44 studies containing 55 SCT models of physical activity were analyzed for overall effectiveness at explaining physical activity behavior. They found that self-efficacy and goals (self-regulatory skills) were consistently associated with physical activity while outcome expectations and socio-structural factors were not. Despite poor overall methodological quality, the results indicated that SCT is a useful framework for explaining physical activity behavior. The authors additionally recommended that all core SCT constructs should be included and measured for reliability to comprehensively assess SCT constructs for theory testing.

Joseph et al. (2016) reviewed the behavioral health theories used in health intervention research and found SCT to be the most frequently referenced theory in the 34 studies included in the review. Additionally, 68% of the SCT based studies reported positive findings for the behavioral interventions, which included physical activity, weight loss, and smoking cessation studies. These findings offer more support for the effectiveness of SCT framework in various domains of research.

2.6 Summary

The body of research above explored literature on the andragogical recommendations for training police, physical and psychological benefits of martial arts training along with its connections to law enforcement, optimal fitness training attributes for police along with their perceptions of training standards, and SCT research in various domains to lay the foundation for the present study. Studies related to the impact that police training and experience has on their self-defense efficacy are minimal. The overall premise of the present study is to contribute to this body of research by assessing the influence of police training on self-defense efficacy from a quantitative perspective. SCT will additionally be used to gain insight on police defensive tactics training reform from a qualitative perspective using veteran officers.

CHAPTER 3: METHODS

In order to gather a robust body of information on both the impact of defensive tactics training and the current state of unarmed non-lethal force training in the police community, quantitative and qualitative methods of analysis were deemed necessary. The quantitative component of this study assessed the self-defense efficacy of new officers in non-lethal force situations via a self-efficacy survey before, after, and 6 months following their academy training. In the qualitative component of the study, focus groups were held with veteran officers to assess their perceptions of whether, and to what extent, martial arts/defensive tactics training can have an impact on police reform for non-lethal force situations.

The research questions used to guide the qualitative component of the study were:

1. What are veteran officers' perceptions of the quality and quantity of the police defensive tactics training they receive?
2. How do veteran officers feel about police departments having a mandated, ongoing, in-service defensive tactics training program to increase officer safety and get regular practice handling less-lethal force situations?
3. To what extent do veteran officers' perceive their personal experiences and departmental culture factors into the way less-lethal force situations are handled?
4. What recommendations do veteran officers have for reforming police defensive tactics training?

Why a Multi-Method Approach?

A multi-method research design involves both quantitative and qualitative studies that are used together to address different components of a research project. While each study was conducted to stand alone in addressing a specific aspect of the research, the results of the studies

form a more comprehensive picture. In the case of the present study, understanding the perceptions of police officers with various levels of experience is important to gain valuable insight for making any necessary changes to police training. Additionally, gathering both objective data along with subjective information based on the potentially valuable insight developed from years of experience will provide a more complete understanding of the research inquiry. For these reasons, a multi-method design was used in this dissertation.

The quantitative component of this investigation was conducted via the survey method. The survey method is used to determine present practices and opinions from the target population. The qualitative component, in contrast, was conducted via focus groups. A focus group is a small group of individuals who are interviewed together regarding a specific topic (Thomas, Nelson, & Silverman, 2005).

3.1 Part 1 – Recruit Officer Self-Efficacy Study

Participant Recruitment

For the quantitative section of the project, participants were solicited from recruits attending one of three University of Illinois Police Training Institute Basic Law Enforcement (i.e., Academy) classes, including one pilot group. To be included in the main study results (i.e., baseline data, pre-post analysis, and follow-up analysis), the recruit must have completed the pre-training survey, finished the Academy and post-training survey, worked full-time as a police officer for six months following the Academy, and completed the primary measures for analysis. Before participation, eligible participants read the informed consent form and agreed to participate in the project. Demographic data was collected followed by the self-efficacy measure (see Procedures section for details).

Procedures

Police Training Institute

The training intervention for this study was administered via the University of Illinois Police Training Institute (PTI) Basic Law Enforcement Academy. PTI holds multiple 14-week, 560-hour resident academy training courses throughout the year to prepare recruits to excel as police officers in the State of Illinois. Within the area of physical conditioning and use of force, recruit officers receive 14, 4-hour blocks of firearms training, 13, 4-hour blocks of arrest and control tactics training (defensive tactics), daily 1 hour physical fitness training sessions, and 8 hours of verbal de-escalation training. The arrest and control tactics base curriculum includes standing control positions and takedowns, handcuffing tactics from various positions, pressure points, weapon retention, and ground defense tactics. The ground defense techniques include tactics for safely getting up from the ground, tactics for getting past a subject's legs on the ground, escaping from the bottom while being mounted, and submissions from the bottom if someone is between the officer's legs grabbing their weapon. The daily physical fitness training consists of total body callisthenic exercises including jogging/running, jumping jacks, push-ups, pull-ups, squats, lunges, and stretching (Schlosser, 2013).

With the exception of the pre and post training data for the first class, the investigator administered the surveys online via Qualtrics to the PTI classes in person before the first defensive tactics (DT) training session and upon completion of the last DT session. The pre and post-training surveys for the first class were administered via email using a Word document. The investigator emailed all participants six months following graduation from the Academy requesting they complete a final online survey via Qualtrics. During all data collection dates, participants were given access to the informed consent for participation, the investigator

explained it in detail, and answered any questions they had. The investigator emphasized that participation was completely voluntary, all individual responses would be kept confidential, and that none of the instructors or employees at PTI would have access to individual participant responses. The study was approved by University of Illinois Institutional Review Board prior to data collection.

Baseline Questionnaire

Participants completed a baseline questionnaire beginning with a “Yes” or “No” question confirming they understood the informed consent and agreed to voluntarily participate in the study. The questionnaire also included items regarding demographic information such as sex, age, height, weight, race/ethnicity, level of education, previous martial arts/self defense training experience, and years of experience in each martial arts/self defense program (see Figure 1).

Informed Consent

Do you consent to participating in this survey?

Baseline Questionnaire

1. Please indicate your sex.
2. What is your age?
3. What is your height?
4. What is your weight?
5. What is your race/ethnicity?
6. What is the highest level of education you have completed?
7. Have you ever practiced any martial arts or self-defense?
8. If yes, what style(s) did you practice? How long did you practice each style?

Police Defensive Tactics Self-Efficacy Scale

This survey is designed to assess an officer's perceived ability to handle a violent encounter using non-lethal defensive tactics. A number of situations are described below. Please rate how confident you are that you can perform each task **as of now** using the sliding scale to select the appropriate number. Please answer honestly. Your individual answers will be kept strictly confidential and will not be identified by name.

Rate your degree of confidence by recording a number from 0 to 100 using the scale given below:

0	10	20	30	40	50	60	70	80	90	100
Cannot do at all					Moderately can do					Highly Certain can do

- I can effectively control a violent subject who is bigger than I.
- I can effectively take a violent subject to the ground.
- I can remain calm while engaged in a violent encounter.
- I can effectively control a standing violent subject.
- I can effectively control a violent subject on the ground.
- I can think clearly while engaged in a violent encounter.
- I can effectively defend myself in a violent encounter.
- I can apply defensive tactics training I receive to control a violent subject.
- I can effectively defend myself against a violent subject who is bigger than I.

Figure 1: Baseline Questionnaire and Self-Efficacy Scale.

Police Defensive Tactics Self-Efficacy Scale

The baseline questionnaire was followed by a self-efficacy scale specifically created for assessing a police officer's perception of their ability to effectively protect themselves using DT in a non-lethal, violent encounter. Considering there are, to our knowledge, currently no scales that specifically assess police defensive tactics and non-lethal force self-efficacy, a scale was created to contribute to this line of research. The scale constructed for this study closely followed Bandura's (2006) book chapter "Guide for Constructing Self-Efficacy Scales". According to Bandura (2006), "There is no all-purpose measure of perceived self-efficacy" (p. 307). Since most "all-purpose" self-efficacy scales may have limited relevance to the domain of functioning, they may also be of limited explanatory and predictive value (Bandura, 2006).

In the nine-item survey, officers were asked to rate how confident they are that they can perform each task. Examples of survey items include "I can effectively control a violent subject that is bigger than me" and "I can think clearly while engaged in a violent encounter". The rating scale ranges from "0" signifying "Cannot do at all", to "100" signifying "Highly certain can do" (see Figure 1). The post-training and 6-month follow up surveys were almost identical to the pre-training survey. However, for the post-training survey, additional items were added to assess whether their responses were impacted by the arrest and control tactics training received during the Academy, any additional martial arts/self defense training, and/or the fitness training they received. For the 6-month follow-up survey, additional items assessed whether their responses were impacted by new experiences as a police officer, any additional martial arts/self defense training, and by information gained from their field training officers/senior officers within their department.

Post-Training Survey Items

The post-training survey included the following additional items:

1. Did the arrest and control tactics training you received throughout this police academy improve your confidence toward handling a violent encounter using non-lethal defensive tactics? Yes No
2. Have you participated in any additional martial arts or self-defense training while in the police academy? Yes No
 - a. If yes, did this training improve your confidence toward handling a violent encounter using non-lethal defensive tactics? Yes No
3. Did the fitness training you received throughout this police academy improve your confidence toward handling a violent encounter using non-lethal defensive tactics? Yes No
4. Have you participated in any additional fitness training while in the police academy? Yes No
 - a. If yes, did this training improve your confidence toward handling a violent encounter using non-lethal defensive tactics? Yes No

6 Month Follow-Up Survey

The 6-month follow-up survey included the following additional items:

1. Did your experiences gained as a novice police officer over the past six months improve your confidence toward handling a violent encounter using non-lethal defensive tactics? Yes No
2. Have you experienced any encounters over the past six months where you had to use non-lethal defensive tactics? Yes No

3. Have you participated in any additional martial arts or self-defense training since you graduated from the police academy? ____ Yes ____ No
 - a. If yes, did this training improve your confidence toward handling a violent encounter using non-lethal defensive tactics? ____ Yes or ____ No

5. Have you gained any information from the field training officers/senior officers within your department regarding non-lethal defensive tactics? ____ Yes ____ No
 - a. If yes, did this information improve your confidence toward handling a violent encounter using non-lethal defensive tactics? ____ Yes or ____ No

Pilot Group Testing of Cronbach's Alpha

Pre-training data from the first Academy class ($n = 60$) was used to test the reliability of the self-efficacy scale using Cronbach's Alpha. The results yielded a strong reliability coefficient of .930. The pre-training and post-training data from this group was included in the overall data analysis and no changes were made to the scale before administering it to the participants from the two subsequent Academy classes.

Data Analysis

Data analysis was done using SPSS version 24.0. The baseline questionnaire and the self-efficacy scale were first checked for missing data and errors by the investigator. An Excel data file was created with participant ID numbers and their responses. The participants' body mass indexes were reported in $\text{kg}\cdot\text{m}^2$ using the height and weight data. The self-efficacy scale responses were calculated for each participant by summing the confidence scores across the items and dividing that number by the total number of items. All demographic data and self-efficacy scores were transferred to an SPSS data file for analysis.

To investigate the primary hypotheses, various analyses were used. Means and standard deviations for pre-, post, and 6-month follow up self-efficacy scores were calculated and a paired samples *t*-test was used to evaluate the differences in pre- vs. post-training self-efficacy scores. Repeated measures ANOVA was used to evaluate the 6-month follow up self-efficacy scores in relation to the pre- and post-training scores. One-way ANOVAs were used to compare the baseline mean self-efficacy scores based on martial arts/self-defense experience. Additionally, an independent samples *t*-test was used to compare pre-training scores by sex, mixed design ANOVAs were used to compare pre-post training scores by the various independent variables, and frequency distribution tables were used to evaluate the specific variables that impacted improvements in the officers' self-efficacy scores (e.g., Academy arrest and control tactics, fitness training).

3.2 Part 2 - Veteran Officer Focus Groups

Participant Recruitment

For the qualitative section of the project, participants were recruited from various police departments in the central Illinois region via email with permission from the respective Police Chiefs. The recruitment email included an informed consent document. In order to be eligible for participation, the officers must be graduates of the Police Training Institute, have a minimum of 5 years of police experience, and have a minimum of two field experiences that required the use of unarmed defensive tactics. Officers who were interested in participating replied to the email with their phone contact information. Officers were screened for eligibility via a brief telephone screener. According to Patton (2002), there are no set requirements for the number of participants in a qualitative study. Therefore, in order to allow adequate opportunities for all participants to share insights and maximize participant comfort, 3 groups of 6 participants were

originally sought for the study. This group size is considered to be within the ideal range for discussing matters in which participants have a degree of expertise (Krueger & Casey, 2015). However, rigorous recruitment efforts resulted in one group of 7 participants and another group of 4 participants. The scarcity of available participants also required those from the same department to be placed in groups with supervisors. To minimize the possibility of suppressing input due to power hierarchies (Williams & Katz, 2001), this potential constraint was discussed with all participants, and all confirmed they were comfortable with speaking freely in the presence of the others in the group. Additionally, the importance of maintaining confidentiality with topics discussed during the focus groups was strongly emphasized prior to beginning each session. The focus group sessions were held in a conference room at PTI during a time and date agreed upon by all participants.

Procedures

As an incentive for participating, participants received free refreshments before the start of the focus group session. This allowed an opportunity for participants to get acquainted with each other, the investigator, and note taker, before engaging in the formal discussion. The focus group participants completed a baseline questionnaire including demographic data including sex, age, height, weight, department, rank, race/ethnicity, and years of police experience. The questionnaire also requested previous martial arts or self-defense training experience, and years of experience in each martial arts/self defense program. Following completion of the questionnaire, officers engaged in a 1.5 hour audio-recorded group discussion. The group discussions were guided by five SCT constructs: behavioral capability, self-regulation, self-efficacy, social support, and outcome expectations. Table 5 explains the proposed operational definitions and their applications to SCT-related topics addressed in the focus groups. An auditor

reviewed these definitions for accuracy before the study was initiated. Previous focus group research has been conducted using these SCT constructs as a framework for physical activity program development in specific populations (Joseph, Ainsworth, Mathis, Hooker, & Keller, 2017). It was postulated that these constructs would have similar applicability to DT program development in the law enforcement population.

Focus Group Guide

An effective focus group guide should include language that is not too formal as well as questions that are semi-structured and open-ended. Participants should also be encouraged to add their own input with ideas out of the established questions (Williams & Katz, 2001). Below is the 11-question focus group guide used in the study.

1. What do you think about the *quality* of the police defensive tactics training you receive to fulfill state requirements?
2. What do you think about the *quantity* of the police defensive tactics training you receive to fulfill state requirements?
3. Tell me about some of your previous experiences in using defensive tactics while on duty.
4. How do you feel about police departments having a mandated, ongoing in-service defensive tactics training program?
5. If a program like this were mandatory, what would be your recommendations for useful content based on your less-lethal force experiences?
6. How do you think your personal experiences factor into the way you now handle less-lethal force encounters?

7. How do you think your department culture, such as informal policing standards passed down from senior officers, factors into the way less-lethal force encounters are handled at your department?
8. What are some recommendations veteran officers have for reforming police defensive tactics training?
9. What are some ways you feel you can improve your ability to effectively protect yourself and others?
10. How have your field experiences positively or negatively impacted your confidence in protecting yourself in less-lethal force encounters while on the job?
11. Does anyone have anything to add or share that wasn't discussed as we come to a close?

Many of the questions above targeted multiple constructs. Questions 1, 2, 5, and 8 targeted outcome expectations; questions 1, 2, 5 and 6 targeted behavioral capability; questions 3, 4, 6 and 9 targeted self-regulation; questions 3, 7, 9, and 10 targeted self-efficacy; and question 7 targeted social support.

Data Analysis

The data from the baseline questionnaire was analyzed quantitatively using SPSS software. The qualitative data was transcribed verbatim and analyzed by researchers. Participants were assigned identification numbers for confidentiality and reporting purposes. A directed approach to content analysis was used to analyze the focus group data (Hsieh & Shannon, 2005). This deductive analysis used SCT as the theoretical framework to understand and interpret the data. This approach was used to conceptually extend knowledge on SCT within the realm of the law enforcement community. The five predetermined SCT constructs were used as the initial coding categories, and guided the reporting and discussion of the results. After the primary

researcher independently reviewed all transcripts and applied the deductive codes, the coded data was checked by other researchers for congruence between coding and participant responses. Once the researchers came to an agreement on proper coding of the data, a final review of all transcripts was conducted to ensure appropriate coding of the data. Upon completion of data coding, a search for repetitive themes and sub-themes within the coded data based on the SCT constructs was conducted. These themes and sub-themes were verified by the other researchers and served as the basis of the qualitative findings.

Establishing Trustworthiness

Lincoln and Guba (1985) list four criteria for researchers to consider in establishing a trustworthy study: credibility, transferability, dependability, and confirmability. The methods used to establish each of these criteria in this study will be discussed.

Credibility

Credibility of data in this study was established through peer debriefing and tactics for aiding in participant honesty. As previously described, peer debriefing along with expert audits were conducted after determining operational definitions, after the group data was initially transcribed and coded, as well as after repetitive themes were established. To aid in ensuring honesty in participant responses, individuals approached to participate were advised of their right to refuse participation or withdraw at any point. Participants were additionally encouraged to be frank in their perspectives from the outset of each session (Shenton, 2004). The moderator used the time in which participants received their free refreshments to facilitate this by establishing rapport, confirming they were comfortable speaking freely during the session, and emphasizing the confidentiality of the environment.

Transferability

Transferability addresses whether the results have the potential to be useful in other settings. Considering qualitative research is not designed for generalizability, the aim of these focus groups was to provide enough depth of perspective from the officers that allow the reader to determine transferability of results (Thomas et al., 2005).

Dependability

Dependability refers to the quality of the data and the researcher's ability to deal with change (Thomas et al., 2005). As previously discussed, the same focus group guide was used for both groups. However, when necessary, follow up and clarification questions were asked during the focus groups and incorporated into the guide for analysis.

Confirmability

Confirmability addresses the importance of taking steps to ensure that "the work's findings are the result of the experiences and ideas of the informants, rather than the characteristics and preferences of the researcher" (Shenton, 2004, p. 72). It is also important that the researcher acknowledge any biases with transparency, use an in-depth methodological description to allow the reader to independently critique the integrity of the results, and recognize any shortcomings within the study's methods (Shenton, 2004). As discussed in my introduction, my close association with all matters of this study, being a police officer, and being a martial arts/defensive tactics instructor could certainly yield several biases.

I have been a police officer for 6 years, a martial arts instructor for 14 years, and a personal trainer for 10 years. My passion for the self-defense related areas of martial arts led me to be immediately critical of the training standards I observed in the Illinois law enforcement community after graduating from the Academy. I wondered if officers genuinely felt prepared to

effectively subdue subjects considering they were not receiving regular in-service training to practice these skills. Additionally, based on my experiences as a police DT instructor, I know the time that officers are allotted for DT training is often limited in quality and depth due to liability concerns related to the risk of injuries, time constraints, as well as budgetary concerns.

I believe that even with limited resources, all police departments can and should have a departmental or regional in-service DT program that meets the needs of the officers in that region. The SCT framework is an effective theory for guiding this change in standards because it addresses the impact of the officer's thought processes related to preparation for violent encounters. In addition, it addresses social factors, such as police subculture, which may be a major hurdle in creating change within a department. My experiences and familiarity with this field lead me to believe the veteran officers would believe there is a need for better, more frequent DT training in the law enforcement community. I anticipated officers would have mixed perspectives on whether training should be mandatory. Additionally, I believed the officers would perceive that their personal experiences and departmental culture influences how they handle force encounters.

CHAPTER 4: RESULTS

4.1 Part 1 – Recruit Officer Self-Efficacy Study

An overview of demographic data from the participants is presented in Table 1. Of the 182 recruits who completed the baseline pre-training survey, 97 participants had no previous martial arts or self-defense experience. Of the recruits enrolled ($N = 185$) across the 3 Academy classes, 46 recruits did not complete both surveys, 2 recruits chose not to participate, and 3 recruits did not finish the Academy. A total of 134 respondents (72% response rate; 108 males, 26 females; $M_{age} = 26.5$; $SD_{age} = 4.4$; age range: 20 – 41 years) completed the pre and post-training surveys and were included in the primary analyses. A total of 92 respondents (50% response rate; $M_{age} = 26.2$; $SD_{age} = 4.4$) completed all 3 surveys and were also included in the primary analyses.

To evaluate the reliability of the self-efficacy scale, Cronbach's alphas were measured for each time point. This yielded reliability coefficients of .959 for the pre-training time point ($N = 182$), .964 for the post-training time point ($N = 134$), and .940 ($N = 105$) for the 6-month follow-up time point.

It was hypothesized that: (1) the strength of the recruit officers' self-efficacy would be moderate before they began Academy training; (2) recruit officers with previous martial arts or self-defense training would have a baseline self-efficacy higher than the untrained group; and (3) recruit officers would have an overall increase in self-efficacy after the Academy training as well as after 6 months of police work, compared to before the Academy.

Table 1

Participant Descriptive Information

		Males	Females	<i>M</i>	<i>N</i>
Participants		151	31		182
Mean Age		27	25	27.0	182
Mean BMI	Pre	27.3	24.1	26.8	180
	Post	27.2	24.1	26.6	133
	6-months	27.4	23.7	26.7	104
Age Groups	20-29	109	25		134
	30-39	38	6		44
	40-49	4	0		4
	Total	151	31		182
Race/Ethnicity	White	92	20		112
	African American	11	2		13
	Hispanic or Latino	14	3		17
	Asian	1	0		1
	American Indian or Alaska Native	0	1		1
	Native Hawaiian or Pacific Islander	0	1		1
	Other	1	0		1
	Total	119	27		146
	Education	High School Diploma/GED	7	0	
Some college but no degree		30	7		37
Associate's degree		19	6		25
Bachelor's degree		59	13		72
Master's degree		3	1		4
Total		118	27		145
Previous Martial Arts/Self-Defense	Yes	73	12		85
	No	78	19		97
	Total				182
Level of Experience	No Experience	78	19		97
	Minimal Experience	19	5		24
	Experienced	51	7		58
	Total	148	31		179

Group Mean Self-Efficacy Comparison

As hypothesized, the strength of the recruit officers' ($N = 182$) pre-training self-efficacy was moderate, with a mean score of 65.15 ($SD = 19.22$; range 0 - 100). A paired-samples t -test was conducted to compare the mean pre- and post-training scores for participants who completed the measure at both time points ($N = 134$). The mean pre-training score was 64.56 ($SD = 20.60$), and the mean post-training score was 85.62 ($SD = 10.97$). Recruits showed a significant increase in self-efficacy from baseline to post-training ($t(133) = 12.80, p < .001, d = 1.28$).

Pre-Training Experienced vs. Inexperienced Self-Efficacy Comparison

A one-way ANOVA was computed comparing the baseline mean scores of participants with no martial arts experience ($n=97$), minimally experienced participants (less than 1 year; $n=24$), and experienced participants (1 year or more; $n=58$) (see Table 2). A significant effect was found ($F(2, 176) = 14.04, p < .001, \eta^2_p = .138$). Tukey's HSD was used to determine the nature of the differences between the groups of participants. This analysis revealed that participants who had no martial arts experience had lower self-efficacy ($M = 59.09, SD = 19.38$) than participants with more than 1 year of experience ($M = 74.97, SD = 15.84, M_{diff} = -15.88$, Cohen's $d = .897$). Participants with more than 1 year of experience and those with less than a year of experience ($M = 65.43, SD = 17.49$) were not significantly different from each other, although the difference did approach significance ($M_{diff} = 9.54, p = .078, Cohen's d = .591$).

Table 2

Mean Pre-Training Self-Efficacy Scores by Experience Level

Experience Level	Self-Efficacy Score		
	<i>N</i>	<i>M</i>	<i>SD</i>
No Experience	97	59.09	19.38
Minimal Experience (<1 yr)	24	65.43	17.49
Experienced (>1 yr)	58	74.97	15.84
Total	179	65.09	19.34

Pre-Training Self-Efficacy Comparison by Category of Experience

A one-way ANOVA was also computed to compare the mean pre-training self-efficacy scores of participants by category of martial arts/self-defense training. The categories included: military training, defensive tactics, traditional arts, combat sports, and those with experience in multiple categories (i.e., blended group) (see Table 3). The blended group had the most participants represented ($n = 25$) and the highest mean pre-training self-efficacy score ($M = 77.45$, $SD = 12.03$). A significant difference was found among the training categories for the pre-training self-efficacy scores ($F(4, 80) = 2.60$, $p = .042$, $\eta^2_p = .115$). Tukey's *HSD* was used to determine the nature of the differences between the groups. This analysis revealed that participants in the blended group had significantly higher pre-Academy self-efficacy than participants in the traditional arts group ($n = 8$, $M = 57.35$, $SD = 24.04$, $M_{diff} = 20.10$, Cohen's $d = 1.33$). No other self-efficacy differences were present at pre-Academy.

Table 3

Mean Pre-Training Self-Efficacy Scores by Category of Training Experience

Training Categories	<i>N</i>	Self-Efficacy	
		<i>M</i>	<i>SD</i>
Military Training	11	68.04	17.65
Defensive Tactics	20	72.05	16.62
Traditional Arts	8	57.35	24.04
Combat Sports	21	73.37	15.24
Blend (Multiple)	25	77.45	12.03
Total	85	72.06	16.62

Pre-Training Self-Efficacy Comparison by Sex

An independent samples *t*-test comparing male ($n = 151$) and female ($n = 31$) recruits who completed the pre-training self-efficacy measure ($N = 182$) also revealed a significant difference between the groups ($t(180) = 5.461, p < .001$). Female recruits had significantly lower pre-training self-efficacy scores ($M = 49.20; SD = 20.85$) than male recruits ($M = 68.42; SD = 17.19$; Cohen's $d = 1.08$).

Median Split Pre-Training Self-Efficacy Comparison by Age

A median split (median age = 26 years) comparison of younger versus older recruits revealed that older recruits ($n = 77; M = 31.26$ yrs; $SD = 3.67$) had significantly higher pre-training self-efficacy (68.47 vs. 62.71, $t(180) = 2.012, p = .046$) compared to the younger recruits ($n = 105; M = 23.58$ yrs; $SD = 1.65$; Cohen's $d = .30$).

Pre vs Post Self-Efficacy Comparison by Experience

A 3 (Experience level: none, <1 yr, >1 yr) x 2 (Time: pre, post) repeated measures ANOVA was calculated to examine the effects of the level of training experience and time (pre-training and post-training) on self-efficacy scores (see Table 4). A significant Experience x Time interaction was present ($F(2, 129) = 11.15, p < .001, \eta^2_p = .147$). In addition, the main effects for experience ($F(2, 129) = 10.39, p < .001$) and Time ($F(1, 129) = 128.27, p < .001$) were also significant. Figure 2 displays the differences in pre-post self-efficacy scores by experience level. The interaction is driven by the large change in self-efficacy in the group with no prior experience ($M_{diff} = -28.16$, Cohen's $d = 1.72$). The group with minimal prior experience also had a sizable increase in self-efficacy ($M_{diff} = -18.45$, Cohen's $d = 1.22$), with those having the most experience showing the smallest change ($M_{diff} = -12.13$, Cohen's $d = .89$).

Table 4

Pre-to-Post Academy Self-Efficacy Scores by Experience Level

	Experience Level	<i>M</i>	<i>SD</i>	<i>n</i>
Pre-SE Score	No Experience	56.41	20.31	66
	Minimal Experience (<1 yr)	65.52	18.27	21
	Experienced (>1 yr)	75.59	17.08	45
	Total	64.40	20.71	132
Post SE Score	No Experience	84.57	11.54	66
	Minimal Experience (<1 yr)	83.97	12.07	21
	Experienced (>1 yr)	87.72	9.47	45
	Total	85.55	10.99	132

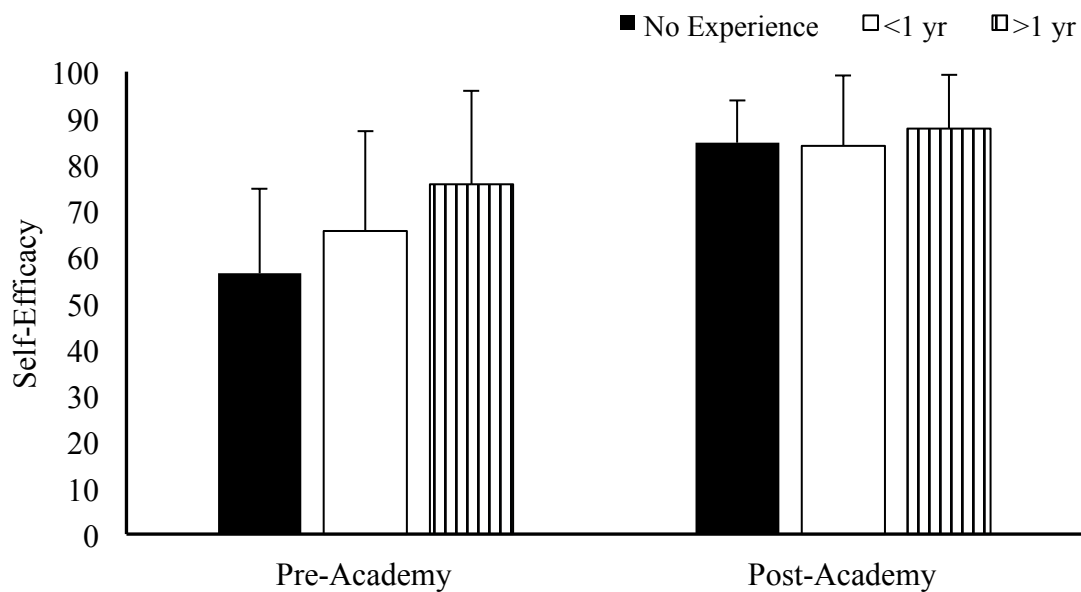


Figure 2. Pre- and post self-efficacy scores by experience.

Pre- vs Post-Academy Self-Efficacy Comparison by Sex

A 2 (Sex: males, females) x 2 (Time: pre, post) repeated measures ANOVA was also calculated to examine whether self-efficacy changed over time and whether there were differences based on participants' sex. There were significant main effects for Time ($F(1,132) = 157.04, p < .001, \eta^2_p = .543$) and for Sex ($F(1, 132) = 27.28, p < .001, \eta^2_p = .171$), but both were superseded by a significant Sex x Time interaction ($F(1,132) = 11.02, p = .001, \eta^2_p = .077$). The interaction is driven by the fact that, while females had lower self-efficacy ($M=47.9\pm 21.6$) before the Academy than males ($M=68.6\pm 18.3$), they had a larger increase ($M=79.7\pm 15.2, SE\Delta = 31.78$, Cohen's $d = 1.74$) following the Academy than the males ($M=87.1\pm 9.2, SE\Delta = 18.47$, Cohen's $d = 1.28$). Figure 3 depicts the differences in pre-to-post Academy self-efficacy scores for males and females.

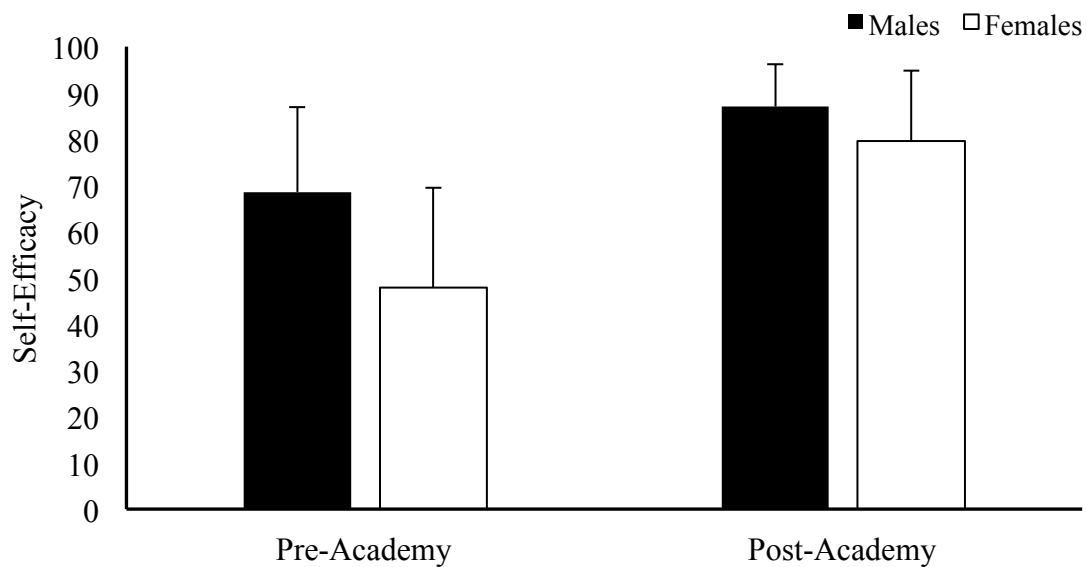


Figure 3. Pre-to-post Academy self-efficacy scores for males and females.

Pre vs Post Self-Efficacy Comparison by Age

A 3 (Age Group: 20-29 yrs, 30-39 yrs, 40-49 yrs) x 2 (Time: pre, post) repeated measures ANOVA examined the effects of age and time (pre-training and post-training) on self-efficacy scores. Neither the Age Group x Time interaction ($F(2, 131) = 0.67, p = .52$) nor the main effect for Age Group ($F(2, 131) = .30, p = .74$) were significant. However, the Time main effect was significant ($F(1, 131) = 18.15, p < .001, \eta_p^2 = .122$). This indicates that self-efficacy increased following Academy, but this was not influenced differentially based on the Age Group of the participants..

Pre vs Post vs Follow-up Self-Efficacy Comparison

A one-way repeated measures ANOVA was conducted to compare self-efficacy scores across the three time points ($n = 92; M_{pre} = 62.74, SD = 19.70; M_{post} = 85.62, SD = 10.38; M_{follow-up} = 84.87, SD = 11.67$). A significant Time effect was found ($F(1.4, 127.04) = 116.97, p < .001, \eta_p^2 = .562$). Follow up comparisons revealed a significant increase ($p_s < .001$) in scores from pre-training to post-training ($M_{diff} = -22.88, \text{Cohen's } d = -1.46$) and between pre-training and 6-month follow-up ($M_{diff} = -22.13, \text{Cohen's } d = -1.37$). However, there was no significant change from post-training to the 6-month follow-up ($M_{diff} = .75, \text{Cohen's } d = .07$). This suggests that the arrest and control tactics training received during the Academy may have aided in increasing the recruits' self-efficacy throughout the training and this increase was maintained after 6 months in the workforce.

Impact of Academy Training on Self-Efficacy

A frequency distribution analysis was run to examine whether the Academy arrest and control tactics training and fitness training improved participant self-efficacy. Nearly all participants (98.5%) reported the arrest and control tactics training improved their self-efficacy

and 88.1% reported the fitness training improved their self-efficacy. Only 11.9% of the participants reported participating in additional martial arts or self-defense training during the time they were in the police academy and all of these participants reported it improved their self-efficacy. Half of the participants (50%) reported that they participated in additional fitness training during the police academy and 95.5% of these individuals reported it improved their self-efficacy. Regardless of the source of change in self-efficacy, 91% of the participants showed an increase in self-efficacy post-training, while 7.5% had a decrease in self-efficacy, and 1.5% displayed no change.

Impact of Field Experience on Self-Efficacy

Regarding those who completed the 6-month follow-up survey ($n = 105$), only 21% of the recruits reported participating in additional martial arts or self-defense training after graduating from the Academy. Additionally, 90.9% of these participants reported this training improved their self-efficacy. When asked about non-lethal force encounters experienced within 6 months of graduating from the Academy, 73.3% of officers reported they experienced at least one force encounter that required the use of defensive tactics. Regarding information gained from senior officers about defensive tactics, 82.9% reported they learned from senior officers and 95.4% of these recruits reported it improved their self-efficacy. In all, 90.5% of the recruits reported their experiences gained during their time as a novice police officer improved their self-efficacy. Interestingly, despite these claims, as previously reported there was no significant change in self-efficacy from post-training to the 6-month follow-up ($p = .89$). Self-efficacy scores at all three time points (pre-, post-, and 6-months post-Academy) are presented in Table 5.

Table 5

Self-Efficacy Pre-Academy, Post-Academy, and 6-Months Following Academy

	Pre-Academy		Post-Academy		6-Months Post-Academy	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Males (<i>n</i> = 73)	67.11	18.02	86.49	9.46	86.85	9.30
Females (<i>n</i> = 19)	45.94	16.98	82.30	13.11	77.26	16.29
Total (<i>n</i> = 92)	62.74	19.70	85.62	10.38	84.87	11.67

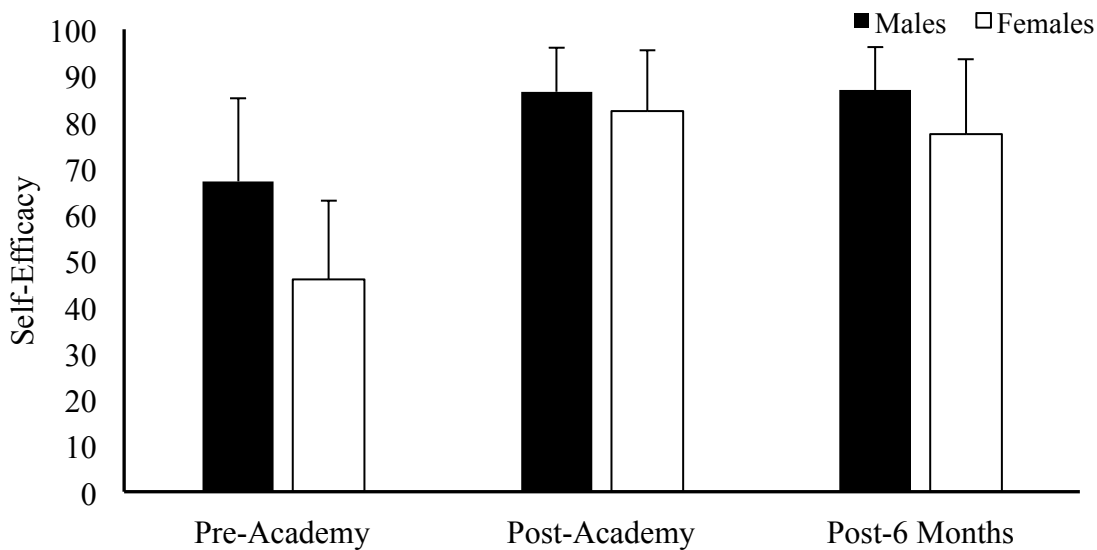


Figure 4. Self-efficacy scores across the three time points.

4.2 Part 2 - Veteran Officer Focus Groups

Participants

The participants within the two focus groups included: 6 officers with previous martial arts/self-defense experience outside of their police training, 5 officers from ethnic minority groups, 4 defensive tactics instructors, and 2 female officers. An overview of the demographic data for the participants in the focus groups is presented in Table 6.

Table 6

Demographic Information for Participants in the Focus Groups

		Males	Females	Group Mean	N
Participants		9	2		11
Mean Age		42.2	33.5	40.6	11
Mean BMI		28.3	23.1	27.3	11
Age Groups	20-29	0	1		1
	30-39	5	0		5
	40-49	2	1		3
	50-59	2	0		2
	Total	9	2		11
Race/Ethnicity	White	6	0		6
	African American	1	0		1
	Hispanic or Latino	1	2		3
	Asian	1	0		1
	Total	9	2		11
Education	High School	1	0		1
	Diploma/GED	1	0		1
	Some college but no degree	1	1		2
	Associate's degree	5	1		6
	Bachelor's degree	1	0		1
	Master's degree	9	2		11
	Total				
Previous Martial Arts/Self-Defense	Yes	5	1		6
	No	4	1		5
	Total				11
Level of Experience	No Experience	4	1		5
	Minimal Experience	2	0		2
	Experienced	3	1		4
	Total	9	2		11

Table 7

Individual Characteristics of Each Participant

Name	Age (Years)	Sex	Police Experience (Years)
Participant 1.1	53	Male	23
Participant 1.2	39	Male	14
Participant 1.3	48	Male	18
Participant 1.4	39	Male	11
Participant 1.5	33	Male	6
Participant 1.6	40	Female	17
Participant 1.7	50	Male	11
Participant 2.1	45	Male	11
Participant 2.2	37	Male	14
Participant 2.3	36	Male	12
Participant 2.4	27	Female	6

Themes and Sub-Themes

In addition to the 5 constructs which emerged as themes within the focus groups, three additional themes surfaced: Rewards, Barriers and Recommendations. Within these 8 themes, several sub-themes also emerged. Table 7 provides a brief outline of these themes and sub-themes. The qualitative findings below present each theme and sub-themes along with empirical support from the focus groups.

Table 8

Themes and Sub-Themes from Focus Groups

Themes	Sub-Themes
Behavioral Capability	Use the Tools on Your Belt Grappling Skills Decisive Behaviors During Encounters
Self-Regulation	Reflections on Experiences Fitness Goals Poor Self-Regulatory Skills
Rewards	Department Incentives
Barriers	Lack of Quality Training Due to Injury Risk Lack of Money, Time, and Support Worrying About Levels of Force During Encounters
Self-Efficacy	Experience Driven Self-Efficacy Attribute Driven Self-Efficacy Confidence vs. Overconfidence
Social Support	Support (of lack thereof) From Administration Departmental Influence on Force Decisions Support from Other Officers/Sergeants
Outcome Expectations	Poor Training Yields Poor Results Officer Training Requires a Reality Based Mindset Violent Encounters Will End Up on the Ground “This is Never Easy”
Recommendations	Consistent and Applicable Training Training Program Ideas Educating the Community

Behavioral Capability

The Behavioral Capability theme targeted the knowledge and skills necessary for officers to effectively train and use DT during force encounters. Discussions related to Behavioral Capability yielded the following sub-themes: Use the Tools on Your Belt, Grappling Skills, and

Decisive Behaviors During Encounters.

Use the Tools on Your Belt

With regard to behavioral DT skills, several officers encouraged the use of the control devices on their duty belts whenever possible (e.g., TASER, baton, and OC/pepper spray) instead of physical empty hand techniques. To illustrate this point, Participant 1.5 shared an anecdote regarding his experience as a rookie officer when he observed a veteran sergeant effectively deploy his OC spray to subdue a subject. He stated:

“...I kicked the bathroom stall open and there's drug paraphernalia all over and it's, it's obvious what's going on. And the first thing he does is square up and like being brand new out of FTO. I'm like, new. Alright, let's go. Here we go...within a split second I hear velcro and see a stream of OC go over my shoulder and hit him in the face and the guy drops like a stack of bricks and we cuffed him up and there was no physical contact or contact other than cuffs.”

This story shed light on the perceived value of control devices for veteran officers and those who may be less physically apt to handle potentially violent encounters, such as officers who are older in age or small in stature. Participant 1.1 alluded to this point when he stated:

“But here's another thing too, as far as, even ‘Participant 1.6 (a female officer)’, you know, don't even equate it to everything's gotta be hands on. That's why God gave us these cool things on our belt. The TASER, the spray, the stick...”

Additionally, while Participant 2.2 expressed strong support for baton use in violent encounters, he noted an experience where it required assistance from another officer, OC spray, empty hand control tactics, and leg strikes with his baton before he was able to gain control of a subject. Despite the support for taking advantage of their less-lethal weapons to effectively

subdue subjects, many officers also considered grappling ability to be the main source of their successes or failures in use of force encounters.

Grappling Skills

In both focus groups, most of the use of force stories officers shared involved both standing and ground control tactics. With this, officers expressed standing control tactics to be the foundation of a successful encounter but ground grappling was where most encounters realistically ended up. Participant 1.1 stated:

“But if someone is good in the rear wrist-lock and just standing control and confident, usually a lot of times you can avoid going to the ground. I've had several of them that go to the ground cause in my opinion the partner just wasn't there. I had an arm behind the back and they just, they couldn't get it or it slipped out and I'm like God dammit. And now boom, now we've got to go to the ground.”

Participant 1.5, who expressed that fights end up on the ground when the officer doesn't get a “good grip on somebody”, echoed this idea. Participant 2.3 additionally expressed the same issue of failed attempts at standing control stating:

“We do a lot on, like I said, stand up one arm takedown, but we've all been there before where the guy gets out of the one arm and now you're ending up in a wrestling match...”

This factor has led many officers to embrace ground control tactics as a strategy regardless of their level of experience. For example, Participant 1.7 shared that he felt ground control tactics should be a focus, among others, in police DT as he had been involved in Brazilian Jiu-jitsu (a ground grappling art) for almost 20 years. In contrast, Participant 2.4 shared that she had limited experience in ground grappling, however, she had been in encounters where

she just “grabbed the guy’s legs so he didn’t run away and held him there until people got there.” Despite her low behavioral capacity for grappling, she was able to use this tactic to successfully accomplish her objective. Participant 1.2 shared an experience where he and another officer, who was approximately 300 pounds, could not effectively control a 150 pound intoxicated subject and were also forced to hold the subject on the ground until other units arrived to assist. Possible tactical, behavioral solutions for the deficits in physical performance emerged through statements of decisive actions during encounters.

Decisive Behaviors During Encounters

Officers noted that DT encounters involved more than physical abilities as there are also tactical considerations during force encounters. Participant 1.6 advised his personal experiences in use of force encounters led him to value the importance of being observant during interactions with the public, noticing and addressing behaviors or “indicators” of the potential for violence beforehand, and carrying yourself with professionalism. He argued these tactics kept many potential altercations from occurring throughout his career. Participant 2.4, who is a female officer, placed emphasis on maintaining distance and using her verbal skills to avoid confrontation, or at least stall the subject until a back-up unit arrives. She stated:

“I’ve worked with people and um, maybe they’re too quick to go to hands on, you know, and I’m a female so I was like talk, talk, talk, I like to talk. Cause I would have a worse off time then like any of you guys.”

Participant 2.2 offered some perspective into physical considerations via his strategies of “fighting dirty” considering that he’s aging. Participant 2.3 conversely articulated his ideas for maximizing the efficacy of technique execution and survival. While he encouraged the strategy of using verbal skills and waiting for back up, he also stated, “...once you got the decision to go

hands on, go hands on and mean it.” Participant 1.6 made a similar point in expressing the limitations of entering an encounter knowing you are not ready mentally and how his training, or anyone who is adequately trained, can act decisively without getting “hyped up”. Participant 1.7 offered support for this idea in stating that a lack of training leads officers to overreact during confrontations. Overall, officers seemed to have their unique strategies for capitalizing on their behavioral capabilities, whether physical or tactical, to effectively handle violent encounters.

Self-Regulation

The Self-Regulation theme addresses officers’ motivation and ability to manage preparation for non-lethal force encounters through goal-setting, self-reward, and self-monitoring. This theme is discussed both from the officers’ own personal lives as well as from their general perspectives on self-regulatory behaviors within the field. The discussions yielded the following sub-themes: Reflections on Experiences, Fitness Goals, and Poor Self-Regulatory Skills.

Reflections on Experiences

During the focus groups, officers discussed how they would frequently reflect on their previous experiences in violent, or potentially violent, encounters to process things that could have been done differently. Participant 2.2 shared a story about a lethal force encounter he had with a suspect who attempted to take his gun while inside an athletic office filled with small cubicles. While he and another officer successfully subdued and arrested the suspect, he reflected on the fact that he did not use enough force early on in the confrontation. He expressed these reflections were commonplace in law enforcement stating:

“...it’s just one of those that you look back at it, and I’m sure all you guys do the same thing, you look back and like man, if I’d just done this or done this, that fight would have

been over right then.”

Along similar lines, while speaking on the impact of experiences on officer confidence, Participant 1.7 mentioned how self-monitoring and reflection can lead to goal-setting practices. For example, he mentioned how negative experiences with restraining females led him to realize he needed more training in this area and reflected on what needed to change in future encounters. Participants 2.1 and 2.2 both shared how struggles with complacency and routine can be detrimental to police officers. Participant 2.1 mentioned how he personally loses his “hyper vigilance” over time while working on shift and explained his goal was to put more effort into increasing this level of awareness.

Fitness Goals

With regard to goal setting, officers often mentioned increasing or maintaining their fitness as a result of their experiences. Participant 2.3 discussed how becoming “completely gassed” in fights with subjects tends to make him realize that he’s out of shape and motivates him to workout. Participants 1.1 and 2.4 both discussed a focus on staying in shape via cardiovascular exercise. Participant 2.4 specifically articulated this as a tactic for the cardio advantage of being able to “stay in the fight a little bit longer...” Considering the officers within the focus group were all experienced, several brought up the fact that they are getting older as a motivational factor for increasing physical fitness. Participant 1.5 mentioned he now focuses on mobility and functional fitness training due to his injuries. He stated:

“I recently started changing to do like mobility type stuff because my biggest concern, I have a pretty bad back and bad knees...if I am going to get hurt on the street, it's probably doing something twisting, turning, lifting.”

Both Participant 2.1 and 2.3 addressed maintaining their fitness goals because they understand that every year they are getting a little older and the subjects they deal with seem to

be getting younger. Regardless of the specific type of fitness goal, the common theme for those who actively pursued their goals seemed to be their overall health and safety due to the demands of the job.

Poor Self-Regulatory Skills

The last sub-theme that emerged within self-regulation related to the poor self-regulatory skills officers tended to display and observe within the department. Regarding the responsibility of maintaining good training habits, Participant 1.3 explained he believes it primarily falls on the individual officers to be motivated enough to do the work on their own time; however, many officers are not. Participant 1.6 discussed how beneficial regular martial arts training would be considering they would increase the amount of time they are effective in a fight because they're "getting that fight time in" during training. Yet again, the majority of officers are not motivated to take these actions. Participant 2.4 mentioned she and her husband frequently discuss their desire and plans to start attending a martial arts class, but she never follows through. She also discussed how she knows officers who do not engage in any training outside of the mandatory control tactics class required every 3 years. In relation to officers with these poor training habits, Participant 1.5 expressed support for the idea of mandated, ongoing departmental in-service training to help officers who have poor training habits and self-regulatory behaviors. He stated that mandated training would help to "force their hand" considering they won't train otherwise, which ultimately places other officers in jeopardy on the street. Strategies for mitigating the effects of poor self-regulatory behaviors, such as mandated trainings, led to discussions on rewards for engaging in training as well as barriers to training.

Rewards

A consistent theme observed across most of the departments represented in the focus groups was the practice of providing rewards or incentives for officers to maintain their physical

fitness. Both Participants 1.1 and 1.5 expressed support for the concept of a department offering a free personal leave day or other incentives for officers who pass a physical test. All departments represented in the focus groups stated that they either have or recently had a reward system for participating in departmental fitness testing which included a free personal leave day. Participant 2.2 stated his department recently did away with the fitness testing but in the past it was twice a year in exchange for a personal day for those who passed. Participant 1.6 and 2.4 stated that while there are no consequences for not passing, fitness testing in their department is mandatory and officers are given opportunities to workout on duty to prepare. Participants 2.3 and 1.5 stated their department does voluntary annual fitness testing in exchange for a personal day if you pass. All testing across the departments were the same, or very similar, to the POWER (Police Officer Wellness Evaluation Report) test required by the State of Illinois. Participant 1.5 mentioned that increasing these types of incentives would “make people want to stay healthy” and “in good standing with training”. However, Participant 2.2 commented that there are barriers to the testing considering his department did away with it as a result of officer injuries. In fact, the barriers and constraints to many of the potential solutions for improving police training and force encounters became a prominent source of commentary throughout both focus groups.

Barriers

Officers addressed three major sub-themes regarding barriers to their progress within the areas of use of force training and violent encounters: Lack of Quality Training Due to Injury Risk, Lack of Money, Time and Support, and Worrying About Levels of Force During Encounters.

Lack of Quality Training Due to Injury Risk

Although the consensus was split across the two groups regarding views on the quality of the training they receive, all participants agreed that the training quality continues to diminish

due to injury risks. Participant 1.5 discussed how their departmental control tactics training slowed down and a few things were changed after an officer got hurt. Participant 1.3, who is from the same department, mentioned how they stopped performing takedowns during training and focused on less strenuous techniques, such as basic handcuffing, due to injury risks.

Participant 2.2 discussed how the issue of officer injuries hindered the quality of training at both departments he had worked at. He explained this was due to departments needing to lower their standards to accommodate the “most out of shape, injury prone person on your department”.

Interestingly, he expressed interest in training in Brazilian Jiu-jitsu, however, he was concerned he could sustain a “career ending injury” if he trained on his own time. Participant 2.3, who is a supervisor, also expressed a level of understanding for why departments lower the training quality stating:

“...from patrol side and from an administrative side, I can see why they don't want people to get hurt from the patrol side. We don't want to have somebody lost to us and be short on the street because they got hurt in DT.”

Participant 1.1 mentioned that even the Police Training Institute was forced to lower the intensity of the training because the instructors and the recruits were getting injured. Overall, officers seem to recognize the need for quality training but also realize it comes with potentially serious health risks.

Lack of Money, Time and Support

Another major barrier was a lack of money and time to support consistent training and potential injury related costs. Participant 1.3 stated:

“Everybody is paralyzed by the same thing. It's money and time.”

He advised the issue of a lack of DT training would always be present within departments until ongoing physical training is mandated by the State of Illinois. In a related topic, Participant

2.2 commented that departments are not willing to invest the time and money to go beyond the minimum standards for training. Participants 2.3 and 2.4 both expressed a desire for more departmental DT training; however, they also acknowledged money, time, and logistical issues were the barriers to this problem. For example, Participant 2.4 explained her department couldn't afford to pull officers from the shift to attend any training due to staffing shortages. Participants 1.3 and 2.3 acknowledged time and money to be personal barriers for them to train in activities, such as martial arts, outside of work. For example, Participant 2.3 stated he was interested in learning Brazilian Jiu-jitsu but it was too expensive considering he may not have been able to attend classes very often due to his work schedule.

Despite these barriers, some officers noted that the personal values of the administration sometimes determined amount of training officers received. For example, Participant 2.2 explained that their departmental fitness testing and incentives program was cancelled by administration due to overtime costs and potential for injuries. Additionally, Participant 1.6 mentioned the amount of DT and fitness training within her department often largely depended on who was in charge during that time. So, regardless of the barriers to training, administrative support seems to play a role in the amount of departmental effort to overcome them.

Worrying About Levels of Force During Encounters

While this was not discussed at length, Participants 2.2 and 2.3 both addressed an interesting barrier while handling violent encounters. This barrier is particularly applicable to the tensions previously discussed between law enforcement and minority communities. Participant 2.2 discussed the “mental block” experienced by constantly worrying about using the right amount of force and the possible consequences of “crossing that line” in a violent encounter. He shared a situation where he applied a “sleeper hold” on a subject who was actively attempting to take his firearm. He stated:

“He was bent under me and I had him in a, in a choke and was, you know, had a good sleeper hold on him. And he started to go limp. And then, then in my head, I was like, oh my God, I'm gonna kill this guy. And at that point I was justified...I can use lethal force at this point, he's trying to get my gun, but in that panic of how is this going to look, you know? And so I loosened up, when I loosened up, he came back and got his legs under him and bowled me over...”

Participant 2.2 explained when an officer's life is at risk, they should be focused on ending the fight rather than the perspectives of others or possibility of injuring the suspect.

Participant 2.3 had a similar situation where he had the opportunity to gain control of a suspect using a lateral vascular restraint but second-guessed himself due to concerns about departmental disciplinary action and media backlash. He commented that officers must get over this mindset and develop the confidence to feel like they can “police in a way that is legal and is justified”. This leads into the next theme of the focus groups, which was the officers' self-efficacy.

Self-Efficacy

The self-efficacy theme addressed the officers' confidence in their ability to successfully use defensive tactics training in real encounters. Officers discussed this theme both from the perspective of their personal lives and based on their general perceptions of the confidence levels of the officers they interact with. The sub-themes that emerged were: Experience Driven Self-Efficacy, Attribute Driven Self-Efficacy and Confidence vs. Overconfidence.

Experience Driven Self-Efficacy

Officers seemed to place emphasis on the impact that their experiences in physical encounters had on their self-efficacy. Participant 2.2 advised he feels “fairly confident” in his abilities now and he's much less worried about it due to his years of police experience. He has

particularly high self-efficacy in his ability to use the baton as he stated:

“But I would never give up the baton, you know, because I know the baton, as long as it doesn't slide out of my hand, I know that the baton is gonna work...”

Participant 2.1 also expressed confidence in his abilities resulting from his career in law enforcement. He stated:

“Yeah, I think like collectively over my career, there's been enough situations I've dealt with that have given me a level of confidence to handle myself in, you know, both, uh, verbally and physically.”

Participant 1.7 explained while he is competent and confident in his defensive tactics, confidence is dynamic and relative to each experience. For example, he expressed he lost confidence in his ability to use the “hypoglossal” pressure point for vehicle extractions due to multiple negative experiences with attempting the technique. However, he mentioned the benefits of training on increasing self-assurance, confidence, changing how you carry yourself and taking you out of that “easy target mode”. Participant 1.5 shared that he has no doubt in his training and ability to at least “tread water” in a physical encounter, but he also values having reliable back up officers as soon as possible. In relation to this, Participant 2.3 explained a potential limitation of high levels of self-efficacy in that officers choose not to wait for back up officers because they think they can handle the subject on their own. One of the factors, in addition to training and experience, which seemed to drive varying strengths of self-efficacy, was their physical attributes.

Attribute Driven Self-Efficacy

Participant 2.4 offered valuable insight on how her self-efficacy is impacted by her smaller stature. She mentioned her self-efficacy in handling lethal and non-lethal force situations was increased due to her PTI training and departmental training, but it seemed to be limited by

her physical attributes. For example, she stated:

“...if you have your basics, it doesn’t matter your gender or size, you’ll be able to at least do your best.”

However, she also acknowledged that she likely wouldn’t “fare as well” as other officers in a one-on-one encounter with a suspect and therefore, she avoids these situations, using verbal skills whenever possible until her back up unit arrives. Participant 2.3 also explained he was confident in his defensive tactics abilities, but felt there was still room for growth. For instance, his views were similar to Participant 2.4 in that he alluded to a decrease in self-efficacy under circumstances where there was a major size difference. He stated:

“...looking at the guy that’s twice my size, my confidence level may just went down a few pegs...”

In addition, he attributed some of his reductions in self-efficacy to his 15 years in law enforcement and declines in fitness. He addressed how he feels a “huge difference” in his abilities stating he’s gotten “softer” compared to when he started his career. He also felt improving his anaerobic training would help him in an encounter. Participant 1.5 also spoke on the impact and perceptions of physical abilities on confidence. He mentioned that people in his department who are physically fit and active, or who train in control tactics or martial arts, exude a clear level of confidence and comfort with use of force situations.

Confidence vs. Overconfidence

Two of the defensive tactics instructors within the focus groups stressed the importance of confidence in law enforcement, but actually warned about the dangers of allowing it to lead to overconfidence. Participant 1.3 stated that while he was confident in his abilities, he would never categorize himself as overconfident. Participant 1.1 stated:

“There's always someone bigger, stronger, quicker and I'll tell them all the time at PTI. You have to have confidence to survive in this job. You cannot be a police officer without confidence. Absolutely vital. But when you go over that line to overconfidence, you're a dangerous cop... I think that overconfident (cop) is going to be the one that might get the rest of them hurt.”

This idea of the dangers of an overconfident cop can be illustrated by excessive habits of initiating physical encounters prematurely or unnecessarily without waiting for back up, as previously discussed. Participant 1.1's habit of passing this advice on to recruits at PTI leads to another important theme, which was social support.

Social Support

The social support construct was initially used to address the extent to which senior officers and colleagues influence officer perceptions related to use of force decisions. However, the discussions in the focus groups yielded a variety of sub-themes related to social support via additional alternative perspectives. The sub-themes that emerged included: Support (or lack thereof) From Administration, Departmental Influence on Force Decisions, and Support from Other Officers/Sergeants.

Support (or lack thereof) From Administration

As briefly mentioned within the “Barriers” theme, administrative support is a critical element to consider regarding defensive tactics training. Participants 1.1, 1.2, and 1.6 explained that departmental training is largely dependent on the values of the administrators responsible for providing training for the department. Participant 1.6 mentioned that if the person in charge of training is “overweight and control tactics was never a priority”, they wouldn't consider it an important area of focus. Alternatively, Participant 1.2 noted due to the strong personal interests of the previous chief at his department, she changed the training culture and held quarterly

firearms and control tactics training.

Another area of administrative support mentioned was to back officers in their use of force decisions. Participant 2.3 shared his appreciation for his administrators who reassured him that his force decisions were justified in various situations he's faced. Participant 2.2 expressed how he's beginning to worry less about force decisions due to the introduction of body cameras and increased administrative support regarding use of force actions. This administrative support in officer's actions during use of force situations may be related to the departmental influence on force decisions.

Departmental Influence on Force Decisions

The departments represented in the focus groups all send their officers to the Police Training Institute for training. Participants 1.1, 1.3, 1.5 and 1.7 all noted this to be a major benefit because it also indicates that they all use similar tactics during force encounters. Participant 1.5 mentioned his department has at least one control tactics instructor on each shift and they follow consistent standards of training. Participant 2.4 discussed how officers even have similar thought processes on when to use force on her shift. Participant 2.3 explained the formalities of departmental influence on force decisions within his department. He stated they have a use of force committee that reviews use of force reports for the purpose of establishing "checks and balances". He mentioned this committee does a good job and expressed the value of having officers, who are defensive tactics instructors, on the committee.

Participant 2.2 addressed a small variation in department culture when he discussed how the TASER is "unofficially" the preferred weapon of choice for physical force at his department. He explained this was due to the fact that one of their use of force instructors personally knew the head of Axon (manufacturer of the Taser brand), and had a personal preference for the weapon. This level of departmental influence driven from an officer offers additional insight into

the value of social support from fellow officers.

Support from Other Officers/Sergeants

Regarding the extent to which senior officers influence other officers, Participant 2.4 stated:

“you take a little bit from everybody that you’re around, either working with, or FTO (field training officer), and then you make it your own...”

She also discussed the practice of reading another officer’s report to learn from their actions and aid in your own thought process on how to handle various force encounters.

Participant 2.2 mentioned how you can also learn what *not* to do from observing senior officers. This healthy appreciation for the support and experiences of senior officers, in conjunction with the autonomy of discretion in decision-making, seemed to create a mutually respectful environment. Participant 2.1 discussed how officers use their collective experiences to problem solve and work through force encounters. Participant 2.4 talked about how officers often try to build “camaraderie” when joining new shifts to increase confidence and trust in one another.

In regard to the leadership, Participant 1.7 talked about how FTOs and sergeants are pivotal in empowering other officers to create an environment where training must be taken seriously. Participant 1.6 agreed with these ideas but added that the “right” sergeants and FTOs should be specifically chosen to accomplish this task. Additionally, Participant 2.3 discussed how officers and sergeants “police our own”. He explained how officers should support each other when they act reasonably during encounters, and hold those who make mistakes accountable by providing extra training to address the issues.

Outcome Expectations

The outcome expectations theme involved discussions on officers’ positive and negative values, beliefs, and anticipated outcomes of non-lethal, violent encounters. The sub-themes

included: Poor Training Yields Poor Results, Officer Training Requires a Reality Based Mindset, Violent Encounters Will End Up on the Ground, and “This is Never Easy.”

Poor Training Yields Poor Results

While there were varying perspectives on whether the issues lie in the quality of training, quantity of training, or both, there was a general consensus that changes to police DT training are necessary. Officers offered a variety of reasons for this based on their knowledge and experiences. Participant 1.5 offered insight into the likely outcomes of training in DT only once a year, as some departments tend to do. He stated:

“...the problem is when you don't practice something, but once a year you can't expect it in a stressful situation for that person to go and tap into that training. They're going to go to what they know and what's easy for them. And most of the time it's not effective.

Which is why you see bad use of force incidents. I think because people go to their most stressful place and do something that's maybe not trained on or that you know, they don't use very often, they don't do it functionally correct.”

Participant 1.7 additionally noted the impact of stress and minimal consistent training on officer performance would also likely lead them to overreact during force encounters. The potential consequences associated with these issues are multiplied when the quality of the training is inadequate.

Participant 2.1 talked about how his department does not train using realistic force and resistance due to fear of injury. He stated this means officers won't truly know if the techniques they are practicing will work for them until they “find out on the fly on the street, and by then it's too late.” Participant 2.2 offered additional support for both 1.7 and 2.1's perspectives, noting these problems can also lead officers to either use too much force and get sued, or too

little force and get themselves or others hurt. Participant 2.1 also discussed the liability concerns regarding inadequate fitness levels and the fact that officers are bound to experience force encounters in their career. He discussed feeling obligated to maintain his physical training to avoid becoming a liability to those that depend on him. Participant 1.5 mentioned the same concerns to support his views on mandating training. He stated:

“I don't care if you choose to not do something that's gonna get you hurt, but I don't want to get hurt or one of my friends get hurt because you didn't do something that was, you know, kind of part of the gig when you signed up for it.”

These concerns for the possible results of poor training also brought various perspectives on the proper reality mindset for training.

Officer Training Requires a Reality Based Mindset

Participant 2.2 talked about preparing for the additional aspects of training that are not often considered, such as rendering aid after a shooting. In discussing his experience in a class he attended, Participant 2.3 shared the related quote:

“You know, your body will only go where your mind allows it.”

He explained how the reality-based mindset for training can be developed by sharing and breaking down officer involved use of force encounters to analyze and learn from them. He also provided an example for his idea of reality-based training through his experience at PTI during a drill designed to get officers “completely gassed.” He explained this force on force drill with a role player in a protective suit gives officers the realistic training and mindset they should be operating under.

Participant 1.5 expressed similar thoughts stating that officers need anaerobic “fight training,” such as drills like hitting a heavy bag for 30 seconds, to realistically prepare for the physical demands of a fight. He also stated officers need exposure to being punched and

engaging in a live physical struggle via activities like boxing and wrestling. He proposed these activities would give them insight into what these situations are like before they experience them under real circumstances. Participant 1.4 addressed a potential limitation of training grappling-based martial arts in that the formal structure can give an unrealistic, false sense of confidence. More specifically, he stated:

“...when you have somebody kneeling in front of you on a mat in a closed environment it’s a controlled situation, which, the dude’s not going to kneel on the street for you.”

Despite this potential constraint, as discussed under the behavior capability theme, officers generally seemed to value the importance of grappling skills. The next sub-theme addressed this same topic, but officers offered a rationale in that there is an expectation for violent encounters to end up on the ground.

Violent Encounters Will End Up on the Ground

Participants 1.2 and 1.3 both explained that more training on the ground is needed because it is much easier to control from that position. Participant 2.3 stated he felt officers do a lot of standing control positions in training but not enough ground fighting considering the fight always ends up there from his experience. Participant 1.5 talked about how popular Brazilian Jiu-jitsu is now and his belief that cops find it useful because the fight ends up there. He stated he feels Brazilian Jiu-jitsu is the “most functional ground combat around”. While he agreed with the inevitability of ground fighting and considered himself the “biggest proponent of grappling”, Participant 1.7 made a similar argument to Participant 1.4 in that he feels grappling on mats and grappling in real encounters are completely different. He described the major differences as resulting from the restrictions in movement caused by the duty belt and the possibility of strikes, biting, and weapons access during the encounter. Nonetheless, Participant 2.3 pointed out that considering what we know about the reality and benefits of grappling, smaller officers in

particular should try to reach a point where they can effectively use Brazilian Jiu-jitsu to protect themselves and control subjects.

“This is Never Easy.”

Regardless of skills and training, one reality that officers alluded to, whether directly or indirectly, was that force encounters are never easy. For instance, several officers explained how surprised they were when they struggled with smaller subjects that they did not expect to have issues with controlling. Participant 1.5 explained when he struggled to take down a 140-pound “small college kid”, it reminded him that “...this is never easy.” Participant 1.6 expressed a similar viewpoint when she underestimated a small 17-year-old male she had to maintain control over to prevent him from reaching in his pocket for a weapon. Additionally, Participant 1.1 was reminded during an encounter with a 14-year-old, 100-pound girl, that going “halfway” and holding back during a force encounter can be dangerous. He mentioned she “had just went insane and fighting for everything in her life” and he had to escalate force for his safety. In an additional testament to the complexity of force encounters, Participant 2.1 talked about the physiological responses to a fight, such as tunnel vision and escalated breathing, and how officers are expected to perform effectively under these conditions despite rarely, if ever, experiencing it. He then stated, “I think we all know the outcome on that one.”

Recommendations

The Discussion section will directly address officer responses to the research question on recommendations for reforming DT training. However, since the premise of these focus groups involved officer recommendations, it was decided that recommendations would also appropriately serve as a theme due to the overall valuable contributions that emerged throughout the sessions. The following sub-themes will be discussed: Consistent and Applicable Training, Training Program Ideas, and Educating the Community.

Consistent and Applicable Training

With regard to recommendations for the amount of training that officers should be provided, participants were consistent in the viewpoint that more training is necessary. More specifically, Participant 1.4 recommended that an hour per week out of each officer's shift be geared toward mandated exercise time. He suggested this would improve the overall health of officers and reduce injury risk both during control tactics training and actual physical encounters. Participants 2.1 and 2.4 both recommended that officers should be training in DT 3 to 4 times a year. In support of this, Participants 2.4 and 2.3 argued that, considering officers go "hands on" with people more than they engage in other uses of force (e.g., firearms), training in this area should be emphasized. Participant 2.4 stated:

"Yeah, I mean we have like monthly shoots, practice shoots cause you know that's important. And then we qualify every year on stuff. But how often is it that we actually shoot somebody? Like, not saying like we don't need that. We definitely do. I'm staying on top of that. We're actually more likely to go hands on with somebody. So why don't we do that more?"

As discussed under the "Barriers" section, a common counterargument to the quote above would be the injury risks of DT training. Participant 1.5, however, recommended a push for continuous training despite this constraint. He argued that injuries are basically inevitable and while departments may lose officers in training, it is better for this to occur in a controlled environment than for officers to get themselves or others hurt out on the street because they didn't properly train.

Concerning recommendations for applicable mandated in-service training for DT, Participant 1.1 recommended that the individual agencies have flexibility in programming based on their needs. Additionally, he stated the training must encompass all areas of use of force, and

that officers should be training about 5% of the time throughout the year. As previously mentioned, Participant 2.4 recommended the training should also involve officers becoming physically gassed to keep them aware of the reality of a fight and the necessity to stay in shape.

Participant 1.7 provided an in depth perspective on both the training content and strategies for keep the grappling training applicable to police work. He recommended consistent training on the “routine stuff”, which he considered to be handcuffing, searching, takedowns, and winning the fight on the ground. However, he felt there should be a focus on understanding the principles rather than just learning techniques in order to mitigate the constraints of a lack of consistent training opportunities in law enforcement. He also strongly opposed the departmental restrictions that have been placed on the use of the lateral vascular neck restraint (LVNR) as he believes it is one of the greatest use of force tools officers have. He stated:

“LVNR should be in everybody’s use of force ability. That should not be a question, it’s a huge issue.”

Regarding grappling for law enforcement, he added that techniques should be trained in uniform with variables introduced while on the ground. For example, he recommended that instructors should throw in rubber knives, or training pistols, while officers are on the ground to keep the training realistic.

Participant 2.3 suggested video analysis training to be a valuable training tool for officers that also has no injury risk. He recommended departments show officers videos of police use of force encounters, discuss the officer’s actions, discuss the decisions made through the lens of department policies, and any changes that would have been necessary to be in compliance.

Training Program Ideas

Participants 1.7, 2.1, and 2.2 all proposed similar ideas regarding a training program structure for police officers. Participant 1.7 suggested police agencies use the implementation of the Army Combatives program (U.S. Army Fort Benning, 2017) as a template for developing use of force training programs and resolving any barriers. Considering the disparities in physical ability and job tasks within a police department, Participants 2.2 and 2.1 recommended a structure similar to the military by providing different training standards and content based on the needs, responsibilities and capabilities of the officers.

Participant 2.3 proposed the idea of a voluntary officer wellness program where officers are either given a stipend for a gym membership, or two officers are trained to become certified instructors and they offer blocks of in-service wellness training to the department.

Educating the Community

Participants 1.1 and 1.5 recommended getting the community involved in discussions on police training to generate support and understanding. Participant 1.1 talked about how citizens have a misunderstanding of the level and frequency of training officers receive. He proposed changing their perceptions would help add pressure to create change in legislation on police training. Participant 1.5 also commented that citizens have inaccurate perceptions of what a violent, non-lethal encounter with police should look like due to what they see on TV and in movies. He stated:

“And when you see an actual fight it's never pretty. It's always sloppy and ugly and you know, arms and legs and flailing and all sorts of crazy stuff and it never looks like what people expected it to.”

With this, Participant 1.1 suggested educating the public on the complexity of police work by putting them through use of force scenarios that officers face.

Summary

The veteran officers' input on the themes discussed was primarily derived from their experiences with use of force encounters in law enforcement, personal struggles and successes in training for these encounters, and the departmental constraints they've faced throughout their careers. Officers were generally aware of the importance of reforming police training for non-lethal force situations and presented valuable insight into improving these standards.

Officers expressed support for additional DT training primarily via the development of grappling ability and realistic training modalities. They acknowledged the burden of continuous training to be on the individual officers, but also addressed the barriers to departmental and state-mandated training and recommendations for overcoming some of these barriers. Although participants seemed to share many flaws within their own self-regulatory skills along with those of their colleagues, they had a relatively strong sense of self-efficacy, which was guided by lessons learned from their use of force experiences. The numerous anecdotes they shared on their physical encounters served as the primary source of logic for their perspectives and rationale on the actions that need to be taken to improve the state of police training. The following chapter will address the findings presented in part 1 of the study, followed by a discussion on each of the research questions posed in part 2 of this dissertation.

CHAPTER 5: DISCUSSION

5.1 Part 1 – Recruit Officer Self-Efficacy Study

The primary aims of part 1 of this study were to: 1) create and test the reliability of a scale designed to assess a police officer's self-efficacy toward protecting themselves using defensive tactics (DT); and 2) use this measure to explore the impact of the University of Illinois Police Training Institute's DT training on an officer's perceived preparedness for handling non-lethal, violent encounters. Previous studies have addressed an officer's level of confidence in their physical abilities (Butler & Petruzzello, 2019; Ellifritz, 2013; Hough, 2017; Renden et al., 2015), but this was the first study to assess recruit officers using a scale specifically designed to assess self-efficacy. It was hypothesized that recruit officers would begin the Academy with moderate self-efficacy, those with previous martial arts/self-defense experience would have higher baseline self-efficacy than untrained recruits, and there would be an overall increase in self-efficacy for the participants at the conclusion of the Academy training and after 6 months of police work.

The Police Defensive Tactics Self-Efficacy Scale showed good internal consistency and reliability for measuring self-efficacy at each time point in the study. Regarding the first hypothesis, recruit officers did show moderate self-efficacy before any training. Female recruits had lower pre-training self-efficacy than their male counterparts did. While self-efficacy increased in both females and males, improvements in self-efficacy for females throughout the Academy were greater than for the male recruits. This supports the effectiveness of the PTI physical training curriculum considering every female recruit who completed the follow-up survey ($n=26$) credited the DT and fitness training with improving their confidence. The differences in self-efficacy between males and females were also observed in the focus groups by

Participant 2.4, who insinuated her confidence in handling violent physical encounters was lower than the male officers.

Despite the fact that over half of these participants (53%) had no previous martial arts or self-defense training, the overall mean pre-training self-efficacy score was 65.15, with the inexperienced group scoring 59.09. Although personality traits were not measured in this study, this may be explained by the possibility that untrained recruits possessed personality traits that encompass more assertiveness, openness and confidence despite a lack of comparable behavioral capability. Certain personality traits have even been identified as ideal predictors of performance in law enforcement (Afsheen, Rafique, Qaisar & Musarat, 2017; Twersky-Glasner, 2005). Another possibility is that these moderate self-efficacy scores could be associated with unreported life or work experiences with violence. For example, participants who may have had increased exposure to violence in their communities, or those who spent time in other law enforcement related careers, may have more confidence in dealing with physical encounters. This may also explain why the older recruits had higher self-efficacy scores before Academy training, although there was no significant difference in the level of improvement between their scores and those of younger recruits from pre- to post-training.

Regarding the second hypothesis, participants with previous martial arts or self-defense experience had greater baseline self-efficacy than those with no experience. However, only those participants with a year or more of previous training showed a significantly greater self-efficacy. In addition, those with no experience showed the largest improvement in self-efficacy upon completion of the Academy. These findings are consistent with previous literature showing that martial arts training is associated with higher levels of confidence in police officers (Ellifritz, 2013; Renden et al., 2015). The applicability and versatility of the training may be a factor in

determining strength of self-efficacy considering those who trained in multiple categories had greater self-efficacy than those in the traditional martial arts category. Additionally, as O’Neill et al. (2019) suggest, adequate martial arts or DT training may also reduce the likelihood of officers unnecessarily escalating to excessive force (e.g., firearms) due to fear caused by lack of confidence in their DT training. This concept is supported by self-efficacy theory in that self-efficacy plays a key role in how one will judge the riskiness of an environmental situation. Those who believe they are skilled in coping with these situations will judge a “potentially hazardous environment” as safe, while those who do not believe in their ability to cope will see themselves as more vulnerable to threats (Ozer & Bandura, 1990). Bandura (1997) also posits that self-efficacy influences the amount of effort an individual exerts and how long they persist when faced with difficult situations. Therefore, both quality martial arts or DT training and high self-efficacy in use of DT seem to be critical attributes for an officer to have to effectively handle a violent encounter.

Regarding the impact of the Academy training, the results related to the third hypothesis revealed that recruit officers’ self-efficacy improved upon completion of the Academy. All but two participants attributed their increase in self-efficacy, at least in part, to the arrest and control tactics they received at the Academy. The fact that over 90% of the recruits showed increases in self-efficacy post-training provides support for the effectiveness of the PTI arrest and control tactics curriculum. Additional influences on the increased self-efficacy among some recruits included participation in additional martial arts training, and to a larger degree, both Academy fitness training and additional fitness training outside the Academy. This highlights the cognitive benefit of fitness training with regard to an officer’s perceptions of their self-defense abilities.

Unfortunately, many studies have indicated that fitness training is often not maintained

after the Academy. This may also explain the concerns many focus group participants had regarding declines in physical ability throughout their career (Anderson, Plecas & Segger, 2001; Anderson, Cychosz & Franke, 2003; Bissett, Bissett & Snell, 2012; Dillern, Jenssen, Lagestad, Nygård & Ingebrigtsen, 2014; Lagestad, Jenssen & Dillern, 2014; Orr et al., 2018). Nevertheless, the results of this study suggest that PTI training provides a solid foundation for officers to start their careers with a healthy level of confidence in their abilities to handle violent, non-lethal encounters when necessary.

Although it was hypothesized that recruit officer self-efficacy scores would continue to increase after 6 months of police experience, they actually remained the same. Additionally, the majority of officers reported they experienced at least one force encounter requiring DT, and their new overall experiences improved their self-efficacy. These results are consistent with the focus group sub-theme, “Experience Driven Self-Efficacy”, where several officers discussed the efficacy-enhancing benefits of their past experiences in using DT. While the plateau in self-efficacy supports the role of Academy training in maintaining one’s self-efficacy over time, it also supports Bandura’s SCT regarding the positive influence of mastery experiences on self-efficacy (Bandura, 1977).

5.2 Part 2 – Veteran Officer Focus Groups

Part 2 of this dissertation aimed to qualitatively assess, in veteran police officers, perceptions of whether, and to what extent, martial arts and defensive tactics training can have an impact on police reform for non-lethal force situations. The veteran officer focus groups, which were held to discuss these issues, addressed 4 research questions:

1. What are veteran officers’ perceptions of the quality and quantity of the police defensive tactics training they receive?

2. How do veteran officers feel about police departments having a mandated, ongoing, in-service defensive tactics training program to increase officer safety and get regular practice handling less-lethal force situations?
3. To what extent do veteran officers' perceive their personal experiences and departmental culture factors into the way less-lethal force situations are handled?
4. What recommendations do veteran officers have for reforming police defensive tactics training?

Each of these questions will be individually discussed with support from the focus group participant commentaries and previous literature.

Research Question 1

The first research question within the focus groups addressed officer perceptions of both the quality and quantity of the DT training they receive to fulfill the state requirements. Participants in both focus groups agreed that the barriers to training (e.g., injury risk, time, and money) are the source of the issue regarding DT training. The first group, however, focused more on how these barriers negatively impact the quantity of the training, while they generally expressed satisfaction with the quality of the training. Participant 1.1 commented:

“Any training, no matter what the quality, is good. Even if it’s not quite on par with some other training.”

In contrast, the second group perceived these same barriers to negatively impact the quality of the training because it led departments to train officers unrealistically with minimal physical resistance. Regarding quantity, the second group was interested in more training, but felt there needed to be more work on improving the barriers that inhibit the quality before focusing on adding more training. Participant 2.2 stated:

“If you're not going to change the way you're doing it. If we're doing this bare minimum, we're using 40% force, so nobody gets hurt. I think it's pointless to do anymore. You wouldn't gain anything.”

Both groups agreed on the importance of consistency in the amount of training and promoted the idea of quarterly DT training to help officers to retain the knowledge. These disparities in perspective on the quality of the training may be a result of bias from the first group. The majority (4 of 7) of participants in this group were control tactics instructors and there were no instructors present in the second group. However, the overall desire for making changes to the way officers train, whether via the quality or quantity, is consistent with previous literature on officer perceptions (Butler & Petruzzello, 2019; Ellifritz, 2013; Kaminski & Martin, 2000; Renden et al., 2015).

Research Question 2

The second research question addressed how officers felt about police departments having a mandated, ongoing, in-service defensive tactics program. The majority of participants across both focus groups (8 of 11) commented they felt a mandated, ongoing in-service defensive tactics program would be good for departments. However, the officers generally felt that the barriers, which were discussed at length in the previous chapter, would be a hindrance to this type of program. Participants commented that financial constraints, lack of time, and “loopholes” used to avoid training would be major issues. These barriers may explain the reason few departments in the U.S. have maintained ongoing performance testing for any duty-related physical skills besides weapons training and emergency vehicle operation (Bissett & Snell, 2008). Participant 2.3 commented that the issues of time and finances should not be a factor if the State makes departments prioritize the training. This idea has validity within the domain of

Academy training considering the Bureau of Justice Statistics (2013) reported 93% of academies developed content for their training programs in response to State or Peace Officer Standards and Training (POST) mandates.

Regarding the use of loopholes to overcome financial constraints, Participant 1.4 provided the example that officers would likely be told, “Watch this 4 hour video while you’re working...that’s your training.” Participants 2.3 and 2.4 also discussed the loopholes individual officers would find, such as the need to modify or be excused from training due to physical limitations. In addition to overcoming the barriers, participants also expressed that another caveat for making the program work would be that the trainers in each department must have some autonomy over the type of DT training administered. For example, Participant 2.2 commented that a “loose framework” must be in place for trainers to create quality programs for their individual agencies. The participants discussed how police agencies vary in size, which is why the program must take the unique needs of the departments into consideration.

Research Question 3

The third research question addressed veteran officers’ perceptions of how their personal experiences and departmental culture factor into the way less-lethal force situations are handled. Regarding the factor of personal experiences, participants repeatedly brought up the importance of verbal skills, a command presence, and the use of the tools on your belt to effectively handle or even discourage less-lethal force situations from escalating. This perspective is supported by the fact that officers are estimated to use force in only 1.4% of the 60 million contacts in the US each year, and most uses of force are low level (Hough, 2017).

Regarding departmental culture, officers addressed the benefits of having multiple departments in the same area receive training from the same source. Participants 1.1, 1.3, 1.5,

and 1.7 all mentioned how the proximity of the Police Training Institute to the departments in the area allows for tremendous cross-departmental cohesion because they all train together.

Participant 1.7 stated:

“We benefit huge here in this area because of the consistency of where we went to the academy. Almost everybody goes here... Outside of this area, it’s way, way different.”

Participant 1.5 added that the cross training at PTI also aids in the various departments approaching less-lethal force situations using the same mindset when assisting each other on calls. A culture such as this one would be a valuable asset to regions all over the State of Illinois. While the Mobile Team Unit (MTU) training structure in Illinois does allow for similar environments as those mentioned by these participants, many regions may not have this cohesion in training because departments often choose to utilize independent sources for their DT training rather than relying on their local MTU.

The participants also discussed intradepartmental practices passed down from senior officers. Participants 2.2, 2.3 and 2.4 all agreed that while learning from senior officers and field training officers (FTOs) is certainly valuable, officers may not always follow or agree with the decision of these senior officers. Officers will learn from the experiences and stories shared by senior officers, but ultimately make their own informed decisions when they are on their own.

Regarding this, Participant 2.4 stated:

“Cause I know, I mean some people have done something and been like I probably wouldn't have done that and you know, just because they did it, I'm not going to do it.”

This mindset is supported by the cognitive component of SCT. At its very core, the vicarious learning construct in Bandura’s SCT posits that we can learn not only from direct experience but also through observing others. Additionally, we can process this information and

selectively choose our actions based on the perceived outcome of the behavior (Bandura, 1989). While the perspectives of multiple officers in this study supported this concept, other studies have displayed the negative consequences of the influence of FTOs (Getty, Worrall, & Morris, 2016) and peer officers (Ouellet, Hashimi, Gravel & Papachristos, 2019) on police misconduct and use of force. For example, after drawing from over 8,500 force complaint records from Chicago police officers, Ouellet et al. (2019) found that associating with officers who have a history of force complaints predicted involvement in additional excessive force complaints. With this, while some officers may act reasonably despite negative influences, the power of socialization within the police subculture must be considering when selecting FTOs and pairing officers on shifts.

Research Question 4

The final research question for the qualitative component of this dissertation involved a request for recommendations on reforming police DT training in today's society. Although many recommendations were previously discussed throughout the Results section, the content below will directly address the officers' responses to the specific questions on recommendations for training.

Several officers (5 of 11) commented that in order for true reform to occur, the responsibility must fall on the Illinois Law Enforcement Training and Standards Board (ILETSB). Participant 1.3 mentioned the ILETSB needs to be more specific about training requirements and include a certain amount of hours in control tactics rather than simply requiring "use of force" training. Participants 1.1, 1.6, and 1.7 added that fines should be implemented if the departments do not comply. As previously pointed out by Participant 2.3, this would incentivize departments to prioritize training.

In terms of physical recommendations, grappling and fitness training were prominent areas of discussion. Regarding grappling, officers focused on the fact that most encounters end up on the ground and therefore, ground defense should be emphasized more, alongside foundational standing control tactics. This premise has been supported by previous literature on use of force and law enforcement training (Hough, 2017; Kaminski & Martin, 2000; Schlosser & Gahan, 2015). Regarding fitness training, Participant 1.5 recommended an ongoing standard for health and fitness considering use of force requires physical strength and officers often get hurt in training and on the street due to poor physical health. Participant 1.4 even mentioned having mandatory exercise time during each officer's shift, which has also been suggested in previous literature on the topic (Lagestad, Jenssen & Dillern, 2014). Participants 1.3 and 1.1 agreed but also advised that the focus should be on increasing incentives for keeping officers motivated to stay healthy and fit rather than mandatory requirements, due to the barriers of potential backlash from police unions. However, upper administrative staff have previously noted that mandatory programs are more likely to be successful than voluntary programs (Bissett & Snell, 2008). Regardless, empirical support for the benefits of fitness training on law enforcement DT has been shown in several studies (Arvey et al., 1992; Dawes et al., 2018; Dillern et al., 2014; Wilmore & Davis, 1979).

Another recommendation officers made for reforming DT training was the use of scenario-based training. Many officers discussed the importance of using scenarios to address the physical, mental, and strategic components of DT training. For example, Participant 2.4 recommended consistent scenarios that would start with training on physical cues, pre-fight indicators, and verbal skills, then work officers to complete exhaustion during the physical component. Participant 2.1 supported this recommendation and added the scenario training

should start with “suspect management” strategies and move along the use of force scale throughout various scenarios. Previous studies exploring both physical and critical thinking based police scenarios have supported the need for this type of training (Chappell, 2008; O’Neill et al., 2019; Renden et al., 2017; Werth, 2011). In addition, training this way allows officers to consistently incorporate verbal de-escalation tactics into their use of force training, which may reduce the chances of a physical encounter ensuing (Terrill, Ingram, Somers & Paoline, 2018).

5.3 Summary

Overall, this multi-method study addressed critical questions about the value and direction of police DT training in the State of Illinois. The recruit self-efficacy study provided insight into the cognitive benefits of DT training at the foundation of an officer’s career. The focus groups provided additional insight and sound input from veteran officers on the current state of police DT training and its potential for a promising future if necessary changes are made.

The depth of the discussions from the focus groups yielded three additional themes: Rewards, Barriers and Recommendations. The “Rewards” theme added valuable information on the programs and incentives officers are provided in their departments to maintain their fitness. The “Barriers” theme was perhaps the most informative addition because officers spent a substantial amount of time explaining the obstacles that prevent them from maximizing departmental and state supported training opportunities. These data provided ideas for addressing problems that need to be resolved within the area of non-lethal force training. The “Recommendations” theme also added to this insight by explaining perspectives offered for improving the state of police use of force training throughout the discussions.

Collectively, the two-part study offered evidence for the value of martial arts or self defense experience and the PTI Arrest and Control Tactics training program on a police officer’s

physical and mental preparation for force encounters. It is also noteworthy to consider the potential contributing factors of PTI's overall teaching structure in the success of the program. Namely, PTI uses an andragogical model, which is ideal for an adult learning environment (Chappell, 2008; Werth, 2011), and they teach the DT program via spaced sessions, which has been shown to be the most ideal structure (O'Neill et al., 2019).

5.4 Overall Strengths and Limitations

To my knowledge, this is the first study to develop and validate a self-efficacy measure that examines a police officer's perception of their ability to effectively protect themselves using DT in a non-lethal, violent encounter. This line of research is timely and has implications for translation and policy reform in law enforcement. Due to the relatively small sample size and the variability in training curricula across police academies, one limitation of Part 1 of this study is the lack of generalizability of the results. While the results certainly offer support for the recruits' perceptions of their training at the Police Training Institute, we cannot presume the same applicability to other police training academies.

One limitation of the qualitative component of this dissertation was having only 2 focus groups with a combined total of 11 participants. While it was certainly my desire to increase participation numbers, unfortunately, after exhausting all resources only 11 participants met the eligibility requirements, expressed interest in participating, and showed up on the scheduled dates. Nonetheless, the aim of this qualitative research remained to provide depth of perspective and insight from the officers based on their experiences. Another limitation was that participants often struggled to answer the research questions directly, or would misinterpret what was being asked. While this limited the focus on gaining maximal insight on the research questions, it generated new ideas, themes, and perspectives, which added great value to the discussion.

5.5 Implications and Future Directions

The police academy is the foundation of a recruit officer's journey in a career in law enforcement. The inherently dangerous nature of the job, along with the responsibility to protect citizens, requires officers to be adequately prepared both physically and mentally. Considering non-lethal force is more common than lethal force during physical encounters, evaluating and improving recruit self-efficacy in this area may positively impact performance in the field. The quantitative component of this study offered a new measure for evaluating officer self-efficacy and showed empirical evidence for the benefits of the Academy training on self-efficacy. With this, individuals who are interested in law enforcement may consider exploring fitness and martial arts training as foundational attributes that will benefit them physically and cognitively throughout their career. Consistent, quality training will serve as a critical source of success in appropriately handling physical encounters; therefore, building strong training habits from inception is highly recommended.

The results of the qualitative component of the study offered ideas for the Illinois Law Enforcement Training and Standards Board and individual agencies to consider for improving the state of police DT training. Although there weren't a large number of participants, the diversity of experience makes the viewpoints of the officers especially noteworthy. For example, the focus groups included insight from DT instructors, minority officers, and women, which added both expert insight into DT training and representation from underrepresented groups.

This dissertation made contributions to an area of research that requires more empirical literature. Future studies should evaluate veteran officers using the self-efficacy scale to assess the impact of police experience, departmental training, and knowledge retention from Academy training on self-efficacy. In addition, future studies may consider replicating the present study at

other academies in an effort to assess the effects of their physical training program (i.e., defensive tactics and fitness) on self-efficacy.

Since many of the barriers to training revolved around the administration, future qualitative research should involve interviews with upper administrative staff on their values and perceptions on improving the quality of officer DT programs. Also, based on the frequent commentary on grappling, it would be beneficial to conduct interviews and/or focus groups with officers who have extensive grappling backgrounds (i.e. wrestling, Judo, Brazilian Jiu-jitsu, etc) and draw on these experiences to determine the best skills and tactics for training other officers. There are many forms of police DT programs available to departments. The findings from this study provide support for the reliability of the training tools being offered.

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