Reality-Based Training in Law Enforcement

Brian Roesti
The Defiance College

Abstract

Reality-Based Training: Preparing the Ohio State Park Officer for Combative Encounters.

Given the benefits of force-on-force scenario training, 16 law enforcement officers with The Ohio Department of Natural Resources, Division of Parks and Recreation participated in scenario-based training during the spring and fall of 2006. This study investigates whether service experience, training, and actual experience significantly impact an officer's ability to employ appropriate tactical responses during a threatening confrontation. Surveys provided data on the participant's prior training, service, and actual experience, and measured general attitudes towards current agency sponsored training. The scenarios were video recorded and evaluated during and after each participant completed the exercise. Results show no significant differences were found between those with more service time, advanced tactical training, or actual experience and those with less service time, little tactical training, or actual experience; suggesting experience may be task specific. This study concludes with recommendations to help improve tactical proficiency during combative encounters.

Background of Study

Stress plays a major role in the police environment. Police, administrators, trainers, and attorneys are cognizant of the stressors brought about by routine activities. To a degree, routine stressors can be managed through exercise, breathing techniques, and debriefing. Unfortunately, the nature of police work provokes outside stressors from imminent threats which can not be immediately controlled. The stress of confronting an armed subject rarely provides the opportunity to seek immediate mediation. The purpose of this study is to determine whether officers within the Ohio Department of Natural Resources, Division of Parks and Recreation are receiving the training required to negotiate a high-stress, dynamic, and rapidly evolving confrontation.

Since the Division's inception in 1949, park law enforcement has struggled to find an identity. Protecting the park was simply a corollary duty tacked on to the primary responsibility of park management and maintenance (Falcone, 2003). Educating violators about the law was, and remains, the predominant enforcement philosophy. While rangers were responsible for enforcement activities and the majority were commissioned officers trained in ranger academies, little continuing training was developed, mandated, or documented; a condition that lingered into the late seventies.

During the ninth annual park manager's conference, instructors from the Ohio State Highway Patrol Academy provided managers with mace (baton) training. Kenneth Havens (1960), then park manager at Hueston Woods State Park, developed a mace training manual for park ranger purposes. The manual was reviewed by the Ohio State Highway Patrol and justifiably critiqued as a poor substitute for proper training and instruction. However, the manual was distributed within the Ohio State Park system as an alternative to no training.

The 1970's prompted a drastic change in park law enforcement. Flickinger (1976) spearheaded an extensive research project in regards to crime in Ohio State Parks. Managers, rangers, and visitors were surveyed as to their general perceptions of crime and safety in parks. Most importantly, attitudes were measured in regards to arming commissioned park managers and rangers. Flickinger's (1976) comprehensive effort directly contributed to many of the advances (training, education, background and psychological checks, fitness standards, law-enforcement tracking system, and the introduction of firearms) observed throughout the 1970's to the present.

Park rangers Gammell and Bonnell (1983) continued the training philosophy with yet another manual. Their work touched upon the critical elements of prior preparation, mental conditioning, and maintaining a survival state of mind; factors which may have been quite progressive at the time. Additional topics opened the door to advanced tactical training, firearms proficiency, and environmental awareness.

Havens (1960), Flickinger (1976), and Gammell and Bonnell (1983) operated in separate decades and contributed to the law enforcement philosophy of the Ohio State Park system in various approaches. Yet each report and manual had one common recommendation: training. [Gammell and Bonnell (1983) specifically recommend training in realistic environments.] A park manager, a professor, and two park rangers recognized that professionally trained park rangers provide public safety, resource protection, and a sense of security to Ohio State Park visitors.

Beyond Flickinger

The "Flickinger Report" (1976) is viewed as the catalyst that created the modern day Ohio State Park Officer. The recommendations expressed by Flickinger initiated changes in training, education, and professionalism. The magnitude of that metamorphosis may be difficult

for todays park officer to appreciate and understand. Change has occurred and will continue. Emerging technology and academic research will serve to further advance the capabilities of the Ohio State Park Officer. Tomorrow's park officer will undoubtedly benefit from the numerous administrators, managers, officers, trainers, and educators (past and present) who share their professional experience.

Current Trends

As Commissioner of the New York City Police Department (1895-1897) Theodore Roosevelt recognized the necessity of police firearms training (Morrison and Vila, 1998). The National Rifle Association and the United States Military continued advancements in firearms proficiency through friendly competition. By the 1930's the Federal Bureau of Investigation received authorization to carry firearms and became renowned as the experts in firearms training and proficiency. Today, the Federal Bureau of Investigation's Practical Pistol Course (PPC) remains the standard for police firearms training.

Firearms and tactical defense training has dramatically changed during the past one-hundred (plus) years. Morrison and Vila (1998) document several trends in firearms training and tactics. Their research illustrates that as technology and equipment advanced, firearms accuracy remained low.

Military advances continue to influence police and combat training. Grossman (1996) and Grossman and Christensen (2004) attribute many of these advanced techniques to S.L.A. Marshall. Key findings by Brigadier General Marshall revealed that merely 15 to 20 percent of individual soldiers fired their weapons at an exposed enemy soldier during World War II.

Theorizing that life-like targets may increase firing rates, the military replaced bulls-eye targets with silhouettes. During the Vietnam War individual soldier firing rates rose above 90

percent. Arguably, General Marshall's greatest contribution to combat training was the exposure of psychological barriers which prevent combat shooting.

Academic research describing psychological, physiological, and biological factors which inhibit combat shooting is a relatively new approach to improving police firearms accuracy. As this research is developed, trainers and administrators should understand its implications.

Stress is a key contributor to the lack of firearms accuracy in combat situations. Vila and Morrison (1994) noted that the qualified officer of 1900 was just as likely to hit (or miss) an assailant as today's qualified officer. Traditional firearm qualification methods do not prepare officers for the dynamics of a rapidly evolving, combat situation (Morrison and Vila, 1998).

Backman, Arnetz, Levin, and Lublin (1996) studied the everyday stress of cadets in the Swedish Police Academy. While not focused on firearms proficiency or defensive tactics, this research provided some positive data on reducing and possibly counteracting the negative psycho-physiological and cognitive stressors through mental-imaging training: a process of mental preparation and focus. Those cadets who received mental-imaging training recorded higher adaptability to stressors commonly reported by police recruits, supporting the theory that mental-imaging and mental rehearsal may be the first step to reducing stress.

Anderson, Litzenberger, and Plecas (2002) identified common stressors and the consequential effects on the heart rate of officers in British Columbia, Canada. Much of the study revolved around the logical and cognitive activities of the forebrain, the effects of stressors on the midbrain, and the resulting "fight or flight syndrome". Their findings revealed sustained heart rates increased eight to 20 beats per minute throughout a shift after dealing with a stressful event. Anticipatory stress was evidenced by higher heart rates when responding to an incident and heart rates were markedly higher when talking with suspects or posturing with a hand on a

holstered weapon. These findings notably observe that sustained heart rates remain higher throughout an entire shift after enduring a stressful event. Higher stress levels place an officer and the public in danger should a second stressful situation occur.

Helsen and Starkes (1999) demonstrated incorporating video and slide-plus video simulation training dramatically increased the decision making ability of police officers in the Belgium Gendarmey. As dynamic training progressed, cognitive recognition of potential hazards increased. Saus, Johnsen, Eid, Riisem, Andersen, and Thayer (2006) supported these findings with Situational Awareness (SA) training at the Norwegian Police University College.

Saus, Johnsen, Eid, Riisem, Andersen, and Thayer (2006) utilized scenario based training with a "freezing" technique. During scenarios cadets were stopped and afforded the opportunity to reflect on situations and decisions made. Cadets exposed to SA training were later compared to those who received simulator marksmanship training. Those receiving Situational Awareness training outperformed those who received marksmanship training during subsequent simulated scenarios.

Vila and Morrison (1994) note psychological and physiological factors associated with stress create an adverse effect on biomechanics. The hyper-activated, stress-induced speed at which one levels a firearm must be countered by "muscle memory" accustomed to operating at a slower pace. To maintain proper alignment, muscle fibers must deploy more counterforce. Concurrently, the eyes must align the front and rear sights, the head and eyes must scan for innocent bystanders, additional threats, and potential cover, and the body must move away from the immediate danger. When speed and accuracy compete for biomechanical dominance both fail.

Training simulators have been shown to work incredibly well for military and police purposes. White, Carson, and Wilbourne (1991) demonstrated the simulators effectiveness in improving M-16 rifle proficiency while simultaneously reducing cost. These anecdotal results should be pleasing to police, trainers, and administrators alike.

Bennell, Jones, and Corey (2007) support the cognitive learning objective provided by simulator training. Trainees are given the opportunity to make use of force mistakes without fatal or litigious consequences. Trainees gain confidence in their ability to make accurate decisions under simulated conditions. The authors suggest training in a cognitive learning environment may assist in memory recall, understanding the dynamics of a confrontation, and defending those actions.

Training simulators have demonstrated their utility in improving decision making capability. The ability to make proactive, rather than reactive, decisions provides an officer with additional use of force options and ultimately may lead to conflict resolution absent the use of force.

Force-on-Force Training

Ralph Mroz (2006) places firearms training in three specific categories; static, dynamic, and force-on-force. During static training stationary targets are utilized to develop basic marksmanship skills. Sight alignment, trigger management, and the biomechanics involved in target practice becomes ingrained into muscle memory in an environment which is not conducive to combative shooting. This is the level at which some agencies “train” their officers.

Dynamic training involves video simulators. The primary objective of dynamic training is the development of cognitive, decision-making skills. Most academic research has concentrated on simulator-based training and the cognitive factors adversely effected by stress induction.

Video simulators provide accurate measurement of tangible activities. Shots can be precisely located and exact violator movements can be manipulated. Simulators are transportable and have the capability of storing numerous scenarios. They are cost effective and add an element of fun to training. Many police agencies are incorporating simulators as a means to enhance their current static training.

Force-on-force training requires interaction with live participants. Mroz (2006) describes force-on-force training as the highest level (at this time) for skill and performance evaluation. Force-on-force training allows one to train under stressful conditions in a realistic environment. It provides for officer assessment over a wider range of activities. Sound tactics can be reinforced and training deficiencies may be discovered. Judgment skills can be assessed and new tactics can be tested in the "classroom."

Terrill (2005) recommends studying police use of force on a transactional scale. Recognizing how specific situations unfold provides a better understanding of force (or lack of force) during subsequent encounters. When tactics are assessed, or when they may intervene, force-on-force training may serve as a more effective instructional method (Helsen & Starkes, 1999). Documenting the results of force-on-force training may be the first step to understanding the dynamics of confrontational encounters. Understanding the situational dynamics of confrontations is crucial to the Ohio Division of Parks and Recreation Internal Investigation Unit and use of force review teams.

Specific Aims

Where training is concerned, the Division of Parks and Recreation is ahead of the curve. Via union agreement, officers with the Ohio Department of Natural Resources have been provided with a minimum of thirty-six hours of annual law enforcement training. At the onset of

this study, there was no mandate for continuing, in-service training (other than firearms qualification) for police officers in the State of Ohio. In 2007, the Ohio Legislature ratified Senate Bill 281 requiring 24 hours of annual training for all commissioned Ohio police officers.

Short-term Goals

In 2006, as a means to provide supplemental tactical training, the Ohio Division of Parks and Recreation initiated force-on-force, scenario training. The primary objective was to introduce stress and decision making in an environment realistic to park law enforcement. This was accomplished by offering scenario-based training in three separate Ohio State Park locations.

Second, the Division of Parks and Recreation wished to determine whether officers were able to "cross-over" tactical skills which had been instructed in static sessions. This was done through instructor evaluation and participant debriefing. Specific areas of concern were maintaining an effective reactionary gap (Faulkner 2001 and 2003), shooting while moving to protective cover and proper utilization of cover (Daniels, 2003; Hoy, 2003; Division of Parks and Recreation, 2004), changing tactics as circumstances change (Magnuson, 1999), and ensuring that officers do not mentally and/or physically shut down during force-on-force scenarios (Murray, 2004).

Third, the Division of Parks and Recreation wished to determine officer satisfaction regarding current tactical training practices. This was accomplished via survey response of those attending force-on-force training. The surveys also assisted with establishing an experience base of those participating in scenario training.

Current Department of Natural Resources practice calls for the evaluation of use of force reports to help determine training deficiencies. Through observation in controlled, force-on-force

scenarios the Division of Parks and Recreation wishes to determine training deficiencies prior to field application. Thirty-six hours of annual law enforcement training is excessive if practical and relevant topics are being ignored (Marion, 1999; Kaminski & Martin, 2000).

Long-term Goals

The primary responsibility of the Ohio State Park Officer is law enforcement. To carry out this mandate, the Division wishes to provide force-on-force training to all park officers. In 2006, sixteen officers participated in a traffic stop scenario conducted at three training locations. The Division wishes to further this training with law enforcement commissioned park managers.

At the onset of this study, the Division employed four certified force-on-force instructors. Due to logistics and time consumed, the Division must develop and certify additional instructors. Additional instructors will assist in the development of new scenarios and a long-term training rotation.

The Division wishes to continually evaluate training methods by receiving feedback from officers. This will assist in determining the direction of future training. Determining and concentrating on the training officers want has many benefits. First, when training is practical and applicable, more officers will actively participate in training rather than simply going through the motions. Second, if officers believe as if their concerns are being addressed, they are more likely to offer constructive feedback. Third, if a consensus can be reached on specific training “wants” the Division may designate it as a training “need.” Spending valuable time on training “needs” frees additional time for training “wants.”

Hypothesis

It is hypothesized those Ohio State Park Officers who have been involved in actual assaults, experienced force-on-force training, or have advanced tactical training will demonstrate

better tactical skills during force-on-force scenario training than those officers who have not experienced actual assaults, force-on-force training, or advanced tactical training.

Experience is arbitrary and service time does not equate to experience. Law enforcement experience varies from park to park. Those officers who work near metropolitan areas will have vastly different visitor and violator contacts than those working in rural settings.

The expectations of Ohio State Park Officers are task specific. Officers are expected to enforce the law, ensure visitor safety, and protect park property. To do otherwise is irresponsible at best; a dereliction of duty at worst.

Actual law enforcement experience is most likely to be park specific. Many officers survive entire careers without drawing their weapon, fighting a combative subject, or fearing for their safety. Others encounter these situations on a frequent basis. The actual experience one receives will help formulate their response to future confrontations. The best way to gain experience is through actual or simulated experience.

Methodology

The observational method utilized in this case study was observer/participant. Participation was limited to assisting with instruction, debriefing, and evaluation of the scenarios. Observations were recorded during the evaluation and debriefing.

In conjunction with the observation of scenarios, data was collected via survey response. The surveys requested general information regarding the participants' title, appointment type, service time, education, and academy training (service experience). Also requested was information on duty related physical confrontations (actual experience), and advanced training within and outside the Division (training experience). Of the 16 participants, 15 completed and returned surveys.

Additional data was obtained through field notes recorded during the scenario. While observing participants, instructors noted proper tactics and deficiencies. Video recordings were utilized to determine training issues overlooked during the scenario. Standard analysis forms (used with permission of Kenneth Murray) were formatted for the specific scenario and made available for recording observations.

Participants

Participants consisted of Ohio State Park Officers whose primary duty stations were at or near the training locations. Sixteen commissioned officers participated in the training. Appointment types consisted of ten full-time and six part-time officers. Fourteen field officers, one specialist, and one investigator made up the study group.

Four instructors (including researcher) conducted the force-on-force scenario training. The instructional group consisted of the Division of Parks and Recreation Law Enforcement Administrator, two Law Enforcement Staff Officers, and one field officer. All four are certified by the Ohio Peace Officer Training Academy (OPOTA) as firearms and force-on-force (as taught by Kenneth Murray) instructors. Three are OPOTA certified Strategies and Tactics of Patrol Stops (S.T.O.P.S.) instructors; including one S.T.O.P.S. instructor/trainer. Two are OPOTA certified defensive tactics and OC/CS chemical repellant instructors.

Participant and Instructor Safety/Protection

Scenario-based training can be dangerous. Lethal consequences have occurred through improper safety protocol. It is important to note that scenario-based training is not Simunition® training. Simunition® is the title of a company that produces many products. Those products include the lethal CQT®, Greenshield®, and Shortstop® cartridges.

The FX® marking cartridge is a non-lethal projectile that leaves a water-soluble mark at the point of contact. This allows for a simulated lethal shot that can be detected by instructors and participants. While considered non-lethal, the projectile can travel in excess of 400 feet per second and can produce bruising, bleeding, welts, and abrasions. For safety, it is recommended to fire FX® marking cartridges at distances greater than 36 inches from the intended target.

To ensure participants and the public did not enter the training area without permission, instructors secured the training site with caution tape, "road closed" and "training area" signs. A secure staging area was established within the training location but away from the actual training site. This ensured the participants could not observe one-another during the scenario and provided an area for security checks on participants and instructors.

One instructor was in charge of the staging area. In the staging area, instructors and participants were required to empty their pockets and place the contents into plastic storage bins. All live weapons were stored in lock-boxes. Instructors and participants were "Terry" searched for weapons. As a secondary safety precaution, a metal detector was used to search for live ammunition and/or sharp objects which may have been overlooked. Violator and participant vehicles were subject to the same search.

When the participants and instructors were deemed safe, a toe-tag was secured to their boot. Once tagged, individuals were not permitted to leave the secure area. Should one leave the training area, the tag was removed. To re-enter, the process was repeated.

A second instructor was in charge of all equipment. Participants were required to wear a helmet with face mask, a throat collar, and groin protection. Optional safety equipment included arm and chest protection, gloves, and heavy pants. Although a heavy, long-sleeve shirt, and

tactical pants provide suitable protection for the arms, chest, and legs, participants would experience the sting of the FX® marking cartridge.

Some pain should be expected; not as a punitive measure but to add reality to the training. Absent the knowledge of pain being involved, participants may not utilize proper tactics. Additionally, those who fear pain may demonstrate apprehension. Both cases lead to "teachable moments" and learning opportunities.

Weapons utilized by participants included the Beretta model 96D, 40 caliber handguns, Remington 870, 12 gauge shotguns, and inert OC/CS chemical repellant. The handguns were fitted with training barrels specifically designed for use with the FX® marking cartridges. The violator was issued a snub-nosed, 38 caliber revolver capable of firing FX® marking cartridges and utilized exclusively for training purposes.

For consistency and safety, one instructor acted as the role-player/violator. The role-player was required to follow a script which guided responses to the participant's actions. This reduced the chance of the role-player "ad-libbing" and ensured the role-player's response and actions were consistent for each participant. If the firearm was deployed by the role-player, the script determined the response to a participant's actions.

During the scenario a safety-instructor was present. The safety-instructor was required to observe and evaluate the scenario and assist the participant as needed. When necessary, the instructor asked questions to prompt the participant into action. This helped instill confidence through positive reinforcement of the participant's ideas. The safety-instructor was also tasked with stopping the scenario should potential dangers be observed.

Most importantly, the safety-instructor ensured the participant did not quit during the scenario. If the participant stopped before the scenario was concluded, the instructor prompted them to continue. This ensured participant safety and helped develop a survival mentality.

Upon completion, instructors debriefed the participants. Participants walked through the scenario and viewed their actions on video. When the participant and instructors were satisfied with the results, the scenario was considered complete. If the participant did not complete certain aspects of the scenario or "froze" due to hyper-vigilance, the participant was debriefed and the scenario was repeated to improve self-confidence and ensure the participants psychological welfare.

Scenario

The equipment utilized during the scenario included Ohio State Park law enforcement vehicles (Ford Crown Victoria), duty weapons (Beretta model 96D, 40 caliber handguns; Remington 870, 12 gauge shotguns; inert OC/CS chemical repellant), Simunition® FX® marking cartridges, and protective gear (at minimum: head, face, eye, neck, and groin protection). The scenario was conducted during daylight hours at three separate parks (Alum Creek, Mohican, Dillon). Participants operated as single-person patrol units and conducted the scenario without the benefit of immediate officer assistance. The violator vehicle was driven and occupied by one person. The scenario was developed by Law Enforcement Staff Officers and was based upon an actual traffic stop, although use-of-force escalation was implemented for training purposes.

The scenario was described as a "low-risk" traffic stop for a minor misdemeanor traffic violation. The participants were instructed to initiate the traffic stop and conduct the approach as practiced in prior training and in field applications.

Through violator contact, the scenario developed into an “unknown-risk” traffic stop. The violator became nervous and uncooperative and provided a psychiatrist’s business card in lieu of a driver’s license. The violator repeatedly asked participants to “call him.” Participants were expected to change from “low-risk” to “unknown-risk” tactics. If tactics were not changed, the scenario escalated to “high-risk” with the violator producing a handgun. At that point, participants were expected to move, draw their weapon, and fire while seeking protective cover. The officers were expected to call back-up officers, medical assistance, and remain behind protective cover until assistance arrived.

The scenario ended when the participant changed tactics from “low-risk” to “unknown-risk” and obtained all relevant information to close the law enforcement action. If the participant failed to change tactics, the scenario escalated to “high-risk.” In this case, the scenario ended when a.) The officer disengaged, returned fire, sought protective cover, and called for assistance and b.) The violator was rendered incapacitated, the participants advised dispatch of the situation, requested emergency medical assistance, and the participants remained behind cover until back-up officers arrived.

At no point during the scenario would a participant be allowed to quit. If the participant stopped before the scenario was complete, they were instructed to continue. If a participant was physically and/or mentally incapable of continuing the scenario would be stopped by an instructor. In the latter case, the participant would be debriefed and the scenario performed a second time. Participants were not permitted to end a scenario believing the confrontation was lost.

Similarities exist between the Division of Parks and Recreation’s traffic stop scenario and the scenario conducted by Shipley and Baranski (2002) with the Provincial Police Academy in

Ontario, Canada. However, Shipley and Baranski were primarily focused on mental preparation of police recruits prior to a conducting a stressful traffic stop (a scenario in which police recruits likely had no actual experience). This study was concerned with the experiential background of officers and their ability to maintain proper tactical proficiency throughout a highly stressful confrontation.

Findings and Analysis

Survey Data

Survey data is based upon the 15 participants who completed and returned the survey. Data was collected prior to participation in the scenario training. The survey was modeled after the questionnaire utilized by Kaminski & Martin (2000).

Surveys indicated that all participants were male. Six served less than ten years and six had greater than 20 years of service. Three participants served ten to 19 years.

Fourteen (93 percent) had some college education and/or a college degree. Six Associates, two Bachelors, and one Masters Degree were recorded among the participants. Six (85.6 percent) of those serving less than 15 years held a college degree. Three (37.8 percent) participants serving more than 15 years had a college degree.

Those serving less than 20 years attended an Ohio Peace Officer Basic Academy. Five of six (80 percent) of those with greater than 20 years service attended a Division sponsored Ranger Academy. This reflects the end of Division sponsored academies which ran from the mid 1970's through the late 1980's.

Training Experience

Six participants reported additional training outside the Division. Thirteen participants cited S.T.O.P.S. training at least once. All but one had experienced reality based training. Reality based training occurrences ranged from a low of one to five times to a high of 26 (plus).

Five participants were certified instructors in various tactical disciplines. Two participants were certified in one topic (S.T.O.P.S. and firearms). Three participants were certified in two tactical subjects (ASP and firearms; Taser and firearms; defensive tactics and OC/CS chemical repellant).

Actual Experience

Thirteen participants had been involved in a weaponless confrontation. Of those, four (30.7 percent) reported 26 (plus) weaponless encounters, five (38.4 percent) had one to five, three (23.0 percent) reported six to ten, and one (7.6 percent) reported 11 to 15 weaponless confrontations.

Twelve participants reported deploying a weapon as a threat of force. The handgun was most often utilized with 11 participants reporting deployment. OC/CS chemical repellant followed with eight reported deployments. The Taser and ASP baton were reported with five deployments each. The shotgun (4) and rifle (1) were the least reported.

Of those reporting weapon deployment as a threat of force, four participants utilized a weapon as an actual response against a combative subject. Three participants reported using OC/CS chemical repellant and one reported using the ASP baton.

Supplemental Survey Data

Survey results reveal fifteen participants (100 percent) reported current weapon training has prepared them for field use. Five (33 percent) believe too little time is spent on joint locks, pressure point control, and handcuffing techniques. Ten (66.6 percent) reported too little time spent on multiple assailant defense and seven (46.6 percent) believe more time should be dedicated to simulation training.

Scenario Evaluation

Scenario evaluations were based upon sixteen participants. The following is a synopsis of observed commonalities.

Fourteen participants utilized a standard walk-up approach. One performed a right side approach and one participant approached somewhat between a standard and tactical left side approach. That participant was later instructed to stay closer to the violators vehicle (standard) or approach from further out; away from the driver's side mirror view (tactical left side).

Analysis reveal participants were generally comfortable and tactically sound during the low-risk aspects of the scenario. However, when the situation changed from low-risk to unknown-risk and tactical adjustments should have been considered, participants were not making the proper modifications.

Fourteen participants (87.5 percent) remained at the violator's vehicle when they recognized nervousness and un-cooperation on the part of the violator. Two participants (12.5 percent) took the violators provided information and returned to their vehicle only to re-approach without confirming the violator's identity. In all 16 cases (100 percent) the traffic stop was handled as low-risk.

When the situation elevated from unknown to high-risk, the participants demonstrated proper tactical disengagement. All moved and drew their weapons. Some fired as they disengaged, other returned fire from behind protective cover. Four participants (25 percent) were reminded to continue the scenario after shots were fired. Three (18.7 percent) approached the "downed" suspect in order to handcuff and secure the violators weapon.

One participant repeated the scenario. It was determined too much time was spent on verbal commands while taking fire from the violator. Commands were repeated in the open with no protective cover. Commands continued after the participant moved behind cover and was still taking fire. Upon completion, the participant was debriefed and the scenario was performed as a "walk-through" with instructors prompting questions to reinforce safer, more effective tactical responses.

One performance activity not specifically designed for measurement proved strikingly obvious throughout the evaluations. Seven participants (43.7 percent) demonstrated problems utilizing portable radios. Two participants switched the firearm from their gun hand to their support hand in order to "key" the lapel speaker. Two participants pointed the gun to the ground when reaching for and/or speaking on the radio. One experienced difficulty taking the radio off the duty belt and one dropped the radio and lowered his head to regain control. Lastly, one transferred the violators provided information into the gun hand (still holding the gun) and used the support hand to key the lapel microphone.

One of the above participants voiced hitting the "panic" button located on the MARCS portable radio. When doing this, a distress signal is automatically transmitted to the dispatch office eliminating the need to actually speak into the radio.

Limitations

The data collected in this study is limited to officers with the Ohio Division of Parks and Recreation. Logistics, budgets, and time consumption restricted the number of scenario training dates to four and the number of participants to 16. Therefore, statistical data is limited to the 16 participants from the Division of Parks and Recreation. One can not assume similar results with other police agencies or replication with the next 16 Ohio State Park Officers. Nor should the results be overlooked.

The survey provided no data on prior military or other police agency experience. Such information may prove relevant in further research.

The scenario evaluations are anecdotal; subject to the evaluators' expectations, training, experience, and prior knowledge. The evaluations were performed "in house" which may result in evaluator bias towards the Division and individual participants.

The participants expected some degree of force. Placing protective gear on participants naturally put them on high alert. Consequently, the participants may perform other than they would in the field.

Recommendations and Implications

Participants performed well during the low-risk portion of the scenario and demonstrated good transitioning from the unknown to high-risk aspect. However, there was no transition observed from low to unknown-risk. This has many implications.

First, it may suggest too much time is being spent on low-risk and/or high-risk training; extremes in which there is either little danger or a high degree of danger. Second, the participants may have formed their tactical performance based upon the successful low-risk traffic stops they

had conducted in the field. Third, the participants may not have recognized or understood the degree of danger involved with the unknown risk.

DeBecker (1997) posits every human aggression situation offers cues as to what may happen next. Nothing happens "all of a sudden" or "out of nowhere." Economic theory suggests the rational person will avoid risk and seek self preservation (Michlethwait, 1995). In either case the rational person must recognize the risk involved in order to avoid risk and seek self preservation.

More time should be devoted to unknown risk tactics. The participants recognized the danger cues but failed to act. The scenario never had to escalate beyond unknown risk. Had the participants returned to their vehicle and called the violator back, as provided in Pennsylvania v. Mimms (1977), the scenario would have ended without a use of force response.

Radio issues should be addressed. Nearly half (43.7 percent) the participants demonstrated problems deploying portable radios. This is an overlooked training issue. Each participant had extensive training on portable radio usage prior to this study. The training assumed officers will be able to use the radio under high stress conditions.

All but one (93.7 percent) gave no thought to hitting the panic button on the MARCS radio. Problems arose as the participants' attention was divided between self preservation, maintaining target acquisition, and calling for assistance. It may be assumed the difficulties would increase had the officer experienced a low-light confrontation and both hands were pre-occupied with a flashlight and firearm.

Divided attention drills should be developed in which officers deploy radios along with firearms and flashlights. This can be easily implemented, at no cost, during semi-annual firearms qualification and training.

Additional scenario-based training should be developed to enhance and reinforce problem solving and decision making skills. The cognitive load theory suggests the mind must be loaded with the proper information in order to have a reference to draw upon. Once one becomes proficient in a particular subject, the cognitive load diminishes when similar complex information is gathered (Bennel, Jones, & Corey, 2007).

Once relevant data and responses have been developed, simulation training has shown to improve the decision making process up to 600 percent (Helsen & Starkes, 1999). Experience can reduce the amount of resources required for specific tasks resulting in more resources available for awareness (Saus, Johnsen, Eid, Riisen, Andersen, & Thayer, 2006).

Simulation training must go beyond use of force scenarios. In order to properly load the mind, conflict resolution, absent the use of force, should be developed. These drills can be incorporated into defensive tactics training.

Kenneth Murray has pioneered the path to reality-based, firearms training. Dave Young III (1992) has done the same with defensive tactics. Young utilizes realistic settings with semi-combative subjects. The Division should incorporate this training as a supplement to using passively resistant subjects. This may help better identify training deficiencies in handcuffing, pressure point control, joint locks, and multiple assailant defense.

Simulated scenario training may help reduce liability issues associated with training. Failure to train and/or adequately supervise has been cited as two of the most common litigations against police administrators (Ross, 2000). In City of Canton v. Harris (1989) the courts specifically cite training as an administrative obligation. Supervisors can be held liable if they know, or should know an officer's training deficiencies in certain areas and the lack of training led to Constitutional violations (Ross, 2000).

Personal communication with Kenneth Murray (February 7, 2008), Sam Faulkner (February 8, 2008), and Dr. Darrel Ross (February 26, 2008) revealed no specific case law citing a lack of reality-based or force-on-force training. However, as more agencies utilize simulators and scenarios it may become the standard upon which all agencies are judged.

Conclusion

This study provided no indication that advanced training, service experience, or actual experience measurably influenced behavior during the traffic stop scenario. Hence, the research did not support the hypothesis. There were no flawless performances or categorically inept conduct displayed. This suggests those participants who possess advanced training and actual use of force experience may have developed portions of their cognitive load in tasks not associated with traffic stops. In this case, task-specificity may have overridden task-relevancy.

Four participants had actual use of force experience with chemical repellant and the ASP baton. Three of the four had prior experience deploying their handguns as a threat of force. During the scenario, one participant initially deployed the chemical repellant prior to transitioning to the firearm; suggesting there was a level of comfort deploying the chemical repellant and task-relevant skills had been developed. However, those four participants showed no indication that past use of force experience with chemical repellant and the ASP baton significantly improved their performance when dealing with a high risk traffic stop involving firearm deployment.

While the hypothesis was not supported by the research, agency relevant data was collected. Information not originally intended for evaluation or measurement was uncovered. Tactical radio deployment issues were discovered and recommendations have been made to

incorporate radio usage with firearms training. This unintentional discovery has made this project worthwhile.

Artwohl & Christensen (1997), Siddle (1995), Grossman (1996 & 2004), Murray (2004), DeBecker (1997), and Young (1992) and many others have dedicated their work to preparing officers mentally and physically for survival. They have spoken with survivors who have shared their experiences so that others may understand and recognize the emotions, the psychology, and the physiology of combat.

The Ohio Division of Parks and Recreation is taking the right steps towards proper tactical, physical, and psychological preparation by conducting force-on-force training. While a limited number of officers participated in the traffic stop scenario in 2006, the scenario-based training did not end. The Division, in response to numerous school, workplace, and other high-profile shooting incidents, conducted active-shooter response training in 2008. Budgets, logistics, and time consumption did not hamper this training as it was held in conjunction with mandated in-service training. All commissioned park managers and park officers began loading their minds with task relevant, cognitive information. Should an active shooting incident occur in a lodge structure, cabin, at a beach, or a town adjacent to an Ohio State Park, officers are able to respond with handguns, shotguns, and rifles knowing that relevant tactical information has been stored.

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