



BODY-WORN CAMERA TOOLKIT TRAINING SPOTLIGHT

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Abstract

Implementing body-worn cameras in a police agency has an impact on virtually every key aspect of police operations, including training, investigations, community relations, resource allocation, and more. With the growing adoption of body-worn cameras, the need for effective law enforcement training is paramount to help ensure that officers have the necessary knowledge and tools to confront the difficult tasks they encounter on a daily basis. The following considerations and resources will serve as helpful information in support of this challenge. As body-worn cameras are part of an emerging and growing field, this list of resources is not comprehensive; the Bureau of Justice Assistance Body-Worn Camera Training and Technical Assistance team will continuously update this document with emerging research, resources, and best practices surrounding these topics as they become available.

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Introduction

With each passing month, law enforcement agencies are implementing body-worn cameras (BWCs) for their officers. Although BWCs were initially introduced into law enforcement as a tool to increase transparency and improve public trust, agencies are now learning about other ways that BWCs can enhance policing. For example, agencies have used BWC video footage to assist with investigations, training, and officer performance and accountability. The success of these practices is greatly dependent on the comprehensiveness of policy, training, and overall compliance mechanisms within police agencies.

Although research on the impact of BWCs is growing (thus better informing implementation), best practices surrounding BWC policies and training are still relatively new. For this reason, information sharing about emerging practices and experiences will be important in shaping and refining the implementation of BWCs nationwide.

To help address this need, in 2015, the Bureau of Justice Assistance (BJA) BWC Training and Technical Assistance (TTA) Program developed the BWC Policy Review Scorecard, which assesses 41 specific policy issues across 11 areas of BWC policy development. This scorecard allows agencies to assess the comprehensiveness of their BWC policies on issues that influence other policies (e.g., state legislation, activation and deactivation, training, officer review of video footage, record retention) and to identify areas where agencies can further improve their policies and practices. The BWC TTA team continuously assesses the BWC Policy Review Scorecard results against emerging practices related to BWC policy. The team is also currently developing resources related to BWC training, including a webinar and a guide for BWC training development (available in summer 2017).

In addition to these resources, the BWC TTA team, in partnership with BJA, developed this document as a resource on BWC training. It identifies guiding principles on training that agencies can use as they develop their BWC training, based on areas of policing where our knowledge of training is more established. The document also explores current research and technical assistance resources available on this topic. Because BWC video footage is highly sought after and scrutinized after an incident involving use of force and/or an interaction with a mentally unstable individual, the BWC TTA team included research and resources related to use of force and Crisis Intervention Teams (CITs). Training around use of force and crisis intervention is robust, and the principles of effective training in those important areas have relevance for BWC training.

The following document outlines the principles of effective training (Section 1); identifies TTA resources for BWCs, use of force, and crisis intervention (Section 2); and provides a list of research on these topics (Section 3). As noted above, the emergent nature of BWCs means that the resources and research identified in Sections 2 and 3 cannot, at this time, be considered all-inclusive or comprehensive, nor can it serve as an endorsement of the listed training practices. Rather, this document provides a reference guide to help police agencies begin developing BWC training and reviewing practices around police-

community interactions that may be captured on BWCs. This document will also help inform the decision of smaller agencies on whether to adopt or adapt BWC training practices from other departments. Continually updating training and policy around emerging, research-based best practices will help to ensure that agencies provide their officers with the latest tools and tactics necessary to safely, legally, and appropriately respond to police-community encounters of all kinds.

Section 1: Principles of Effective BWC Training

The following section identifies training principles that agencies can use to guide their development of BWC training. This section also will help inform the decision of smaller agencies whether to adopt or adapt BWC training practices from other departments. These principles were identified from the best practices used in other police training where our knowledge base is more robust.

1. Assess training needs.

It is important to establish why BWC training is needed in order to begin planning and developing curriculum. Both academy and in-service training needs should be considered. Training should be continually updated with changes in technology and as new examples of effective police practice are documented with BWC footage. Furthermore, training needs in agencies that are just establishing BWC programs will differ from those in agencies with established BWC programs. Key questions should include: What is the need? What is driving training development—changes in law, specific incidents, organizational changes, or community concerns? What is the scope and focus of the training? Who needs to be trained? Why? Conveying to trainees the rationale for and benefits of BWCs (especially for officers) can enhance acceptance among officers. As new training courses or modules are developed, use of the ADDIE (Analysis, Development, Design, Implementation, Evaluation) process can help ensure comprehensive buy-in, training development, and delivery. The problem-oriented policing approach can also be helpful as a foundation for assessing training needs.

Resources:

- <http://www.instructionaldesign.org/models/addie.html>
- <http://www.popcenter.org/learning/>

2. Emphasize adult learning methods.

Research has shown that adults learn differently than children. Learning efficiency and retention are increased by adopting a training format defined by the following components: officers are seen as experienced and knowledgeable adults; training is self-directed with peer-to-peer learning; the instructor is a facilitator of learning (rather than a lecturer); training draws on officers' experiences; and training fosters critical thinking and creativity.

Resources:

- [https://lincs.ed.gov/sites/default/files/11_%20TEAL Adult Learning Theory.pdf](https://lincs.ed.gov/sites/default/files/11_%20TEAL%20Adult%20Learning%20Theory.pdf)
- <https://www.policeone.com/police-trainers/articles/3773478-Curriculum-development-for-law-enforcement-Pedagogy-versus-Andragogy/>

3. Use scenarios and role-playing.

Training should not be strictly classroom-based; rather, it should be grounded in active participation through role-playing and reality-informed scenarios (e.g., hands-on, technology-driven scenarios, such as firearm simulations). BWC implementation is a relatively recent technology advancement, and scenario-based training for BWC deployment has not been developed (to our knowledge). Scenario-based training has been developed for use of force incidents and is shown to provide realistic effective training, as discussed in a recent article in the *Journal of Law Enforcement*.

Resources:

- <http://www.jghcs.info/index.php/l/article/viewFile/461/399>
- <https://www.policeone.com/police-trainers/articles/7119161-Truthly-test-your-officers-with-reality-based-training/>
- https://www.fletc.gov/sites/default/files/imported_files/reference/research-papers/Stress-and-Decision-Making-04-06-12--Approved---Pulic-Release--508-Accessible.pdf

4. Involve external participants.

When possible, individuals outside of the law enforcement agency should play a role in the training, relevant to training content (e.g., for CIT training, include people with mental health problems, advocates, family members, and mental health clinicians; for domestic violence training, include victims/survivors and victim advocates; for procedural justice training, include community members).

Resources:

- <https://csgjusticecenter.org/wp-content/uploads/2012/12/le-essentialelements.pdf>
- <http://www.nami.org/Law-Enforcement-and-Mental-Health/What-Is-CIT>
- <http://health.usnews.com/wellness/articles/2016-12-07/how-crisis-intervention-training-helps-police-deal-with-the-mentally-ill>
- <https://trustandjustice.org/resources/intervention/procedural-justice>

5. Cover the most recent research.

Training should convey to officers the latest in research on a given topic. For BWCS, this includes the resources listed below.

Resources:

- <https://www.bja.gov/bwc/>
- <http://www.bwctta.com/>
- [Office of Justice Programs Diagnostic Center report, *Assessing the Evidence*](#)

6. Train to Policy

Administrative policy should be a centerpiece of the training. The training should convey the critical features of the policy and illustrate both what is permitted and what is not through clear, compelling examples. In addition, training should allow for questions and feedback from the officers about policy and how it translates to situations that come up in the field. Role-playing and scenario-based training can approximate how administrative policy plays out on the street. For example, if the agency policy stipulates that BWCs are activated when officers are dispatched to a call, do not assume that behavior is self-evident. Scenario training can help establish muscle memory, and illustrative videos repeated occasionally during roll call will reinforce consistent behavior.

Resources:

- <http://www.policeforum.org/assets/30%20guiding%20principles.pdf>
- http://www.theiacp.org/Portals/o/documents/pdfs/National_Consensus_Policy_On_Use_Of_Force.pdf

7. Train to local, state, and federal laws.

Many aspects of police training are governed by local, state, and federal law. This is especially true for BWCs. Legal aspects of the issues related to BWC should be prominently featured in the training.

Resources:

- <http://www.aele.org/START.pdf>
- <http://apps.urban.org/features/body-camera/>

8. Emphasize communication and decision-making skills.

Strong communication and decision-making skills are at the core of effective policing. These skills can and should be taught. They have relevance for every type of police training, from de-escalation and crisis intervention, to use of force and BWCs.

Resources:

- <http://www.policeforum.org/assets/30%20guiding%20principles.pdf>
- http://www.theiacp.org/Portals/o/documents/pdfs/National_Consensus_Policy_On_Use_Of_Force.pdf
- <http://www.citinternational.org/>

9. Take time to reflect and debrief.

Officers will be more likely to internalize the central principles of police training when they are given time to process what they have experienced. Encourage students to engage in non-judgmental (non-punitive) discussions about their

thoughts, perspectives, actions, and decision-making. Reflection and debriefing are especially important with role-playing and scenario-based training exercises.

Resources:

- <http://www.nbcnews.com/news/us-news/can-implicit-bias-training-stop-police-officers-acting-hidden-prejudice-n656071>
- <https://www.themarshallproject.org/records/1220-de-escalation-training#.tnUUCpFis>

10. Encourage full participation.

All officers in a training session should actively participate in the classroom discussions, as well as in role-playing and scenario-based training. It is also important to set aside time for officers to participate in training in ways that most effectively allow the officer to be engaged.

Resources:

- https://lincs.ed.gov/sites/default/files/11_%20TEAL_Adult_Learning_Theory.pdf
- <https://www.policeone.com/police-trainers/articles/3773478-Curriculum-development-for-law-enforcement-Pedagogy-versus-Andragogy/>

11. Assess knowledge attainment.

Instructors should assess the extent to which officers have learned the material covered in the training, using objective criteria. Knowledge attainment can be measured through a pre-post written test/survey or participation in role-playing. Poor performance on a post-training test can help to identify the officers in need of additional training. Instructors and agency leaders can also administer the post-training surveys 3 months or 6 months after the training to assess longer-term retention of training objectives.

Resources:

- http://www.popcenter.org/learning/model_curriculum/
- <http://cebcp.org/wp-content/evidence-based-policing/matrix-demonstration-project/Performance%20Measures%20for%20Field%20Training.pdf>

12. Ensure that the training is sustainable.

Instructors should convey the message that training is continuous, especially for skills that are perishable, rarely used, or could atrophy. In addition, concepts and skills may need to be updated as new technology, laws, policies, and research come to light.

Resources:

- <https://www.policeone.com/police-training/>

- https://books.google.com/books?id=17K4WzasDNUC&pg=PA165&lpg=PA165&dq=Fyfe+police+training&source=bl&ots=aobDoIKHle&sig=KVKelijsAIA BhDLwso3A98dmjmk&hl=en&sa=X&ved=oahUKEwjIj_jSx-PSAhUK12MKHYCMDpQQ6AEITjAJ#v=onepage&q=Fyfe%20police%20training&f=false

13. Conduct re-certification or refresher training.

Biannually, at a minimum, police trainers should undergo 16-40 hours of refresher training on effective training and training-evaluation techniques. With the addition of BWC video and supervisory audits, the potential to use refresher training is greatly enhanced and should be incorporated, as needed, to ensure officers' understanding of current policies and procedures.

Resources:

- https://cops.usdoj.gov/html/dispatch/o8-2014/LE_Instructors_and_DeEscalation.asp

14. Use training to reinforce a learning environment.

Department leadership should establish procedures through which lessons learned by officers on the beat are effectively integrated into training curricula. Using role-playing scenarios taken directly from fellow officers' experiences (through reports and BWC footage) help to reinforce the relevancy of the training and make it memorable. Some agencies now use actual BWC footage for training purposes. Learning from agency successes and failures is critical. Sentinel event training and assessment, in which agencies formally learn from mistakes or "near misses," are gaining popularity in police agencies. The National Institute of Justice's Sentinel Event Initiative provides more detail on this approach.

Resources:

- <https://www.policeone.com/police-jobs-and-careers/articles/3502446-Becoming-a-learning-organization/>
- <https://www.policeone.com/police-leader/articles/7782615-4-keys-to-making-your-police-agency-a-learning-organization/>

15. Assess training, policies, and practices routinely.

It is important for a law enforcement agency to evaluate its training on a given topic regularly to ensure that the latest developments in law, research, policy, and practice are incorporated into the curricula. It is also important to regularly (every two years, at a minimum) evaluate an agency's overall training academy, curricula, and policies, to ensure that they are relevant and effective. Body-worn technology is constantly advancing, and case law is beginning to be established. Keeping up-to-date on the latest advancements and legal standards is vital.

Resources:

- <http://www.calea.org/content/programs>

16. Reinforce leadership training at all ranks.

As often and appropriate as possible, training should reinforce the notion that law enforcement officers are leaders within their communities and should behave as such. The BJA-sponsored Valor for Blue training program is built around such leadership principles. Blue Courage is another such program. The curricula in both programs recognize the nobility and responsibility of the profession of policing.

Resources:

- <https://leb.fbi.gov/2011/march/perspective-principles-of-effective-law-enforcement-leadership>

Section 2: Training and Technical Assistance Resources

The following section outlines the TTA resources for BWCs, use of force, and CIT. There is significant crossover between BWCs, use of force, and officer responses to citizens who are struggling with mental health issues. As a consequence, the resources below for each area reflect that crossover. These resources are not meant to be comprehensive; rather, this section represents our best knowledge in these areas to date and serves as a starting point for agencies implementing training related to BWCs. The BWC TTA team will update this list periodically and welcomes any recommendations for additional TTA resources in these topic areas.

Body-Worn Cameras

The increase in agencies implementing BWCs,¹ and increased interest in the use of BWC video footage after a police critical incident (i.e., officer-involved shooting) stresses the need for agencies to ensure that their policies, training, and compliance mechanisms meet high professional standards and research-tested best practices. The following outlines the TTA resources available regarding BWCs.

Technical and Training Assistance:

- BJA BWC Toolkit – www.bja.gov/bwc
- BWC TTA – <http://www.bwctta.com/>
- BWCs & Gender-Based Violence – <http://www.aequitasresource.org/trainingDetail.cfm?id=174>
- The Regional Training Center – <http://sdrtc.com/courses/ca-post-certified-law-enforcement-training/>
- Georgia Public Safety Training Center – <https://access.gpstc.org/student/classes/public-catalog>

State Laws requiring BWC Training:

- Texas – <http://www.legis.state.tx.us/BillLookup/BillSummary.aspx?LegSess=84R&Bill=SB158>

Law Enforcement Training References:

- Los Angeles Police Department – Developed a training program to encompass all aspects of the BWC training for all divisions of a police department.
- Las Vegas Metropolitan Police Department – Developed an innovative training program where they share critical incidents to the community via YouTube. <https://www.youtube.com/watch?v=nWjoDBFqgYo>

¹ One source estimates that one-third of the approximately 18,000 police departments in the United States are using or planning to use BWCs (<http://fox6now.com/2015/03/02/one-third-of-united-states-police-departments-using-body-cameras-theyre-expensive-so-are-they-worth-it/>).

- Maryland Police Training Commission – http://www.mdle.net/pdf/Body-worn_Camera_Procedural_Reference_Guide.pdf
- Dubuque, IA Police Department – Developed an innovative training program in which they incorporate community members into training sessions using BWCs to give them a personal perspective.

Use of Force

Although use of force incidents are rare in comparison to calls for service, such incidents are often highly scrutinized by both internal and external stakeholders. Because these events are complex in nature, it is particularly important to learn from them and incorporate the lessons into police training. The use of BWCs, both as an investigatory tool and a learning tool, allows agencies to continually reassess their policies and training programs. The following outlines the TTA resources available regarding use of force.²

Use of Force Scenario-Based Training:

Police trainers refer to “Use of Force Scenario-Based Training” as force-on-force training, scenario-based training, and reality-based training interchangeably. The term “scenario-based” refers to a training approach designed with participants’ direct involvement in real-world situations in mind, which relies on controlled exercises in which the trainees are presented with cues similar to those found in the actual task environment and then given feedback regarding their actions and responses. This method attempts to mimic the stress involved in real-world situations to further test and prepare the trainee.

Training Publications:

- Police Executive Research Forum (PERF) – *IACT: Integration Communications, Assessment and Tactics*, October 2016 (<http://www.policeforum.org/trainingguide>) – Use of Force training guide that takes research-driven practices and applies them to an integrated training approach
- PERF – *Guiding Principles on Use of Force*, March 2016 (<http://www.policeforum.org/assets/guidingprinciples1.pdf>) - The latest best practices from law enforcement around the country, including recommendations on use of force
- PERF – *Re-Engineering Training on Police Use of Force*, August 2015 (<http://www.policeforum.org/assets/reengineeringtraining1.pdf>) – Best practices for use of force training that discusses controversial issues around use of force and the “warriors vs. guardians” mentality

² While use of force training is particularly important, we stress that agencies must first ensure that their use of force policies are comprehensive and meet best practice standards. We encourage readers to review our document, [Body-Worn Cameras and Use of Force: Opportunities for Action](#). This document provides law enforcement agencies with options for reassessing their department’s use of force policies and other related procedures as they implement BWCs.

- U.S. Department of Homeland Security (DHS) Federal Law Enforcement Training Center – *Stress Exposure Training Guidelines: Instructor Guide to Reality-Based Training*, September 2011
(http://www.virtualtacticalacademy.com/files/stress_exposure_training_manual_9-26B.pdf) – Training guide for instructors on reality-based training, with a focus on stress factors

Law Enforcement Training References:

- Fairfax County, VA Police Department – *Use of Force Policy and Practice Review of the Fairfax County Police Department*, PERF, June 2015
(<http://www.fairfaxcounty.gov/policecommission/materials/fairfax-county-police-dept-final-report-june19.pdf>)
- Seattle Police Department - Use of Force Policy (<http://www.seattle.gov/police-manual/title-8>)
- U.S. Customs and Border Protection – *Use of Force Case Review and Polices*, PERF, February 2013
(<https://www.cbp.gov/sites/default/files/documents/PERFReport.pdf>)
- New York Police Department – *Evaluation of the New York City Police Department Firearm Training and Firearm-Discharge Review Process*, RAND, 2008
(http://www.nyc.gov/html/nypd/downloads/pdf/public_information/RAND_FirearmEvaluation.pdf)
- Las Vegas Metropolitan Police Department – *Use of Force YouTube Videos*
(https://www.youtube.com/playlist?list=PLPgkMKfX-f5GzI57j9fUMksqqoU_Qmtzh)
- Philadelphia Police Department – *An Assessment of Deadly Force in the PPD*
(<https://ric-zai-inc.com/Publications/cops-wo753-pub.pdf>)
- Kansas City, MO Police Department – *Arbinger Case Study*
(<https://arbinger.com/case-studies/kansas-city-police-department/>)
- Los Angeles, CA Police Department – *Use of Force Policy*
(http://www.lapdpolicecom.lacity.org/041817/BPC_17-0153.pdf)

Training and Technical Assistance:

- Advanced Law Enforcement Rapid Response Training –
http://alertrt.org/course_types/view/37
- University of Missouri Extension, Law Enforcement Training Institute –
<http://leti.missouri.edu/use-of-force.aspx>
- National Law Enforcement Training Center – <http://www.nletc.com/training-courses>
- Northern Virginia Criminal Justice Training Academy –
<http://www.nvcja.org/services-view/practical-exercises/>

- Fair and Impartial Policing (Bias Training) – <http://www.fairimpartialpolicing.com/>
- Georgia Public Safety Training Center – <https://access.gpstc.org/student/classes/public-catalog>
- BJA VALOR Initiative – <https://www.bja.gov/programs/valor.html>
- American Corrections Association – https://www.aca.org/ACA_PROD_IMIS/Docs/Training/Use%20of%20Force%20Training_flyer.pdf
- DHS Federal Law Enforcement Training Center – <https://www.fletc.gov/training-catalog>
- IACP Use of Force Resources: <http://www.iacp.org/useofforce>

Crisis Intervention Teams

Because police critical incidents often involve community members with mental health problems, we felt it important to include resources related to CIT training. As more agencies implement BWCs, they should consider using CIT training that meets high standards so that officers are prepared to respond to incidents effectively and with minimal harm. The following outlines the TTA resources on CITs.

CIT Training: A CIT program is a model for community policing that brings together law enforcement, mental health providers, hospital emergency departments, and individuals with mental health illness and their families to improve police responses to people in crisis, especially to reduce harm to officers and civilians.³

Training and Technical Assistance:

- De-escalation training for dealing with mental illness, drug/alcohol additions, autism, post-traumatic stress disorder, and others – <http://umcpi.org/services/de-escalation-training/>
- Police Mental Health Collaboration Toolkit – This provides resources for law enforcement agencies to partner with mental health providers to effectively respond to calls for service, improve outcomes for people with mental illness, and advance the safety of all. The toolkit provides information on the various models of police mental health responses occurring across the country. <https://pmhctoolkit.bja.gov/>
- Mental Health First Aid – This is an 8-hour course that teaches first responders how to identify, understand, and respond to signs of mental illnesses and substance abuse disorders in a community. It provides first responders with the skills needed to reach out and provide initial help and support to someone who may be developing a mental health or substance use problem or experiencing a crisis. <https://www.mentalhealthfirstaid.org/cs/>

³ <http://www.nami.org/Law-Enforcement-and-Mental-Health/What-Is-CIT>

- CIT Center – This is an innovative first-responder model of police-based crisis intervention with community, healthcare, and advocacy partnerships. Basic Goals of CIT include improving officer and consumer safety and redirecting individuals with mental illness from the judicial system to the healthcare system.
<http://www.cit.memphis.edu/bjaa.php>
- Improving Response to People with Mental Illness – There are 10 important program elements that jurisdictions should consider when planning, implementing, or enhancing a police–mental health collaboration program. This document focuses on specialized, law enforcement–based response programs that meet three criteria: (1) They enhance traditional law enforcement roles to provide a new set of response options for frontline personnel that are tailored to the needs of people with mental illnesses; (2) When appropriate, they establish a link for these individuals to services in the community; and (3) They are based in law enforcement agencies with strong collaborative ties to mental health partners, other criminal justice agencies, and community members.
<https://csgjusticecenter.org/wp-content/uploads/2012/12/le-essentialelements.pdf>
- National Alliance on Mental Illness – Site offering best practices on CIT training
<http://www.nami.org/Law-Enforcement-and-Mental-Health/What-Is-CIT>
- School Crisis Prevention and Intervention Training Curriculum –
http://www.csus.edu/indiv/b/brocks/workshops/apa/prepare_poster_apa_july_11_2007.pdf

State Laws Requiring LE Mental Health Training:

- New Jersey – http://www.state.nj.us/lps/dcj/njptc/pdf/njsa52_17b-69-2.pdf
- Connecticut – <https://www.cga.ct.gov/2015/TOB/s/pdf/2015SB-01089-Roo-SB.pdf>

Law Enforcement Training References:

- Houston Police Department (HPD) – The Crisis Call (9-1-1) Diversion Program is collaboration between HPD, the Harris Center for Mental Health and Intellectual and Developmental Disability, and the Houston Emergency Communications Center. Although there are calls for service that can be dangerous and volatile, many of the calls involve non-emergency situations that are better served by connecting callers to mental health professionals. Harris Center Phone Counselors work alongside HPD Patrol Desk Unit Officers and Dispatchers and are reviewing calls for service that meet certain mental health criteria. The phone counselor reaches out to the person who placed the call and offers them a mental health response. If the caller accepts this response, the phone counselor then provides the caller with a complete telephonic assessment and makes any appropriate referrals, as needed, including to the Harris Center Mobile Crisis Outreach Team, Crisis Counseling Unit, and/or the NeuroPsychiatric Center. If it is determined that the caller is in need of immediate services or that they are still requesting law

enforcement response, the Phone Counselor connects the call back to law enforcement with a specific dispatch request.

- Albuquerque Police Department – This department is working to reduce uses of force by law enforcement through CIT training and the Extension for Community Healthcare Outcomes (ECHO) Model, which links specialists at an academic hub with primary care clinicians in local communities. ECHO is a collaborative model of medical education and care management that aims to disseminate best practices while expanding capacity to treat and train more people.

<http://www.gocit.org/echo.html>

Section 3: Research Resources

The following section outlines the research conducted on the training of BWCs, use of force, and CITs. These resources are not meant to be comprehensive; rather, this section represents our best knowledge of the research in these areas to date and serves as a starting point for agencies implementing training related to BWCs. It is important to note that a review of the Crime Solutions website (<https://www.crimesolutions.gov/TopicDetails.aspx?ID=6>) and George Mason University's Evidence-based Policing matrix (<http://cebcp.org/evidence-based-policing/the-matrix/>) revealed no research-based training entries in either source. Thus, according to the best available information, there is no evidence base for police training in this country.

Body-Worn Camera Training

The implementation of BWCs in policing is still relatively new. Evaluations that examine the effectiveness of BWC training have not been undertaken. As such, this section simply provides information and guidance about training for BWCs. While some of the resources listed below do not count a 'research', they impart lessons learned and sound advice from the Department of Justice and police associations; as such, they can be instructive. As research studies and evaluations become available, this section will be updated.

Police Officer Body-Worn Cameras: Assessing the Evidence, Office of Justice Programs, 2014

Claims for the benefits of body-worn cameras are examined based on available research and conventional wisdom. Benefit claims are that body-worn cameras increase transparency in police encounters and victim views of police legitimacy; deter police wearers of the cameras from abusive behavior and citizens from resisting police initiatives; have evidentiary benefits to support arrests and prosecution; and provide opportunities for police training. There is little reliable research to support these claims, other than that which has shown body-cameras reduce untruthful complaints against police and can be a useful training tool. Some concerns and problems with police body cameras include citizen and police officer privacy concerns, officer safety and health concerns, investments in training and policy development, and the significant resource investment. The report recommends that at this stage, agencies should proceed cautiously in considering all the issues mentioned in this report before investing in the cameras. Also, agencies that use the cameras should collaborate with researchers in designing rigorous implementation and impact evaluations of the technology and its implementation. Independent research on body-worn camera technology is urgently needed, since most of the claims remain untested. The report concludes that research shows great promise for use of body-worn cameras as a training tool. 2 tables, references, and appended list of useful guides to body-worn camera technology and a policy template for body-worn camera policy.

<https://www.ojpdagnosticcenter.org/sites/default/files/spotlight/download/Police%20Oficer%20Body-Worn%20Cameras.pdf>

Implementing a Body-Worn Camera Program: Recommendations and Lessons Learned, COPS/PERF, 2014

Abstract: In recent years, many law enforcement agencies have been deploying small video cameras worn by officers to record encounters with the public; investigate officer-involved incidents; produce evidence; and strengthen agency performance, accountability, and transparency. While BWCs have the potential to improve police services, they also raise issues involving privacy, police-community relationships, procedural justice, and technical and cost questions, all of which agencies should examine as they consider this technology. PERF, with support from the Office of Community Oriented Policing Services, conducted research in 2013 on the BWC use, which included interviews with police executives, a review of agencies' policies, and a national conference at which 200 police executives and other experts discussed their experiences with BWCs. This publication describes the findings of this research, explores the issues surrounding BWCs, and offers policy recommendations for law enforcement agencies. <https://ric-zai-inc.com/ric.php?page=detail&id=COPS-P296>

Body-Worn Video Guidance, UK, College of Policing, 2014

Abstract: This guidance updates and replaces *Home Office (2007) Guidance for the Police Use of Body-Worn Video Devices*. It explains the relevant legal framework under which forces in England and Wales should operate Body-Worn Video (BWV). It also provides consistency in operating procedures and information-management processes for the practical use of BWV. The guidance follows the structure of the key principles for the overt use of BWV, and the procedures should be considered a minimum standard for using BWV devices. They should be used as a basis for force operating procedures or standing orders relating to the use of this equipment. This guidance must be read in conjunction with *Digital Imaging Procedure, Police Use of Digital Images, Code of Practice on the Management of Police Information, and Surveillance Camera Code of Practice*. <http://library.college.police.uk/docs/college-of-policing/Body-worn-video-guidance-2014.pdf>

Police, Camera, Evidence: London's cluster randomised controlled trial of Body Worn Video, College of Policing, 2015

The cluster randomized controlled trial (RCT) reported in this paper tested the impact of BWV on complaints against the police, frequency of stop and search and CJ outcomes for violent incidents in ten Metropolitan Police Service (MPS) boroughs between May 2014 and April 2015. The BWV intervention involved: training officers to use BWV; allocation of a personal issue BWV; and on-going supervision and guidance on use. When the in-house training was provided before the roll out in May 2014 officers were positive about the support provided. Although satisfaction regarding support was sustained in subsequent surveys, feedback throughout the trial suggested some frustration, notably

around a lack of on-going or ‘refresher’ training and technical support. Three main issues were highlighted with training: a lack of accessible practical and technical support once back on borough (i.e. for effective use of back office functions); that training had focused too heavily on how to use the cameras (as opposed to issues such as when to use the cameras); and there was too long between the training and receiving a camera for operational use. Overall the findings suggest there are potential benefits of Body Worn Video (BWV), although those related to criminal justice outcomes were not fully realized during the timescales of the trial and need the support of criminal justice partners to be achieved. <https://www.bja.gov/bwc/pdfs/CoPBWVreportNov2015.pdf>

3 phases of body-worn camera training that police departments need to adopt, Policeone.com, 2017

To maintain the efficacy of a BWC program, it is important for chiefs to continually educate themselves about BWCs, continually train officers about the utility of the technology, review the challenges other agencies are facing and modify, if necessary, any policy as new issues, legislation or case law surfaces. Law enforcement agencies need to develop BWC training as a multi-phase process that covers the lifespan of the technology. If an agency is procuring BWCs and expects the technology to last five, 10, 15 years or indefinitely then officer training must mirror this intention. There are several training approaches an agency can adopt to meet their unique needs and three training phases every agency must have in place in order to get the most return on their BWC investment (from an efficacy perspective). They are initial officer training, week one training, and ongoing BWC training. Initial officer training is typically done by the BWC solution provider because they know the nuances of the solution, are able to answer questions about its capabilities and some combination of hands-on, classroom and online training is often part of the negotiated contract. The second phase is an opportunity for law enforcement agencies to take a step back and see which officers understand how to operate the BWC and which officers are having challenges adjusting to the new technology. The final training phase is ongoing education for officers and administrators to share new departmental policies about BWCs, digital evidence collection or preservation and any new case law that has surfaced since deployment that may impact how officers use BWCs. <https://www.policeone.com/police-products/body-cameras/articles/289603006-3-phases-of-body-worn-camera-training-that-police-departments-need-to-adopt/>

Use of Force Training

Simulation and Scenario-Based Training Evaluations

Andersen, J. P., & Gustafsberg, H. (2016). A training method to improve police use of force decision making: a randomized controlled trial. *Journal of Police Emergency Response*, April-June 1-13.

Abstract: Police safety and use of force decisions during critical incidents are an ongoing source of concern for both police practitioners and the public. Prior research in the area of police performance reveals that psychological and physiological stress responses during

critical incidents can shape the outcome of the incident, either positively or negatively. The goal of this study was to test a training method to improve use of force decision making among police. This randomized controlled pilot study consisted of training officers to apply techniques to enhance psychological and physiological control during stressful critical incidents. Of a pool of 80 police officers, potential participants were invited based on equivalent age, years of experience, physiological characteristics (i.e., body mass index [BMI] and cardiovascular reactivity), and expertise. Results revealed that the intervention group displayed significantly better physiological control, situational awareness, and overall performance, and made a greater number of correct use of force decisions than officers in the control group (all p values < .01). The relevant improvements in use of force decision-making found in this pilot study indicate that this training method warrants further investigation. Improved use of force decision making directly translates into potential lifesaving decisions for police and the civilians they are working with.

Andersen, J.P., Pitel, M., Weerasinghe, A., & Papazoglou, K. (2016). Highly realistic scenario based training simulates the psychophysiology of real world use of force encounters: Implications for improved police officer performance. *Journal of Law Enforcement* 5(4), 1-14.

Abstract: Much police ‘Use of Force (UOF)’ training focuses on range shooting, classroom-based learning, and minimal exposure to realistic scenarios. Consequently, police officers may not be prepared for real-world critical incidents, due to lack of experience making UOF decisions during high stress. This study compared two SWAT (“Special Weapons and Tactics”) teams (n=24) to examine the best-simulated physiological stress responses in real-world law enforcement UOF encounters. Results revealed officer physiological stress to highly realistic scenario training was significantly correlated to the stress responses of active duty police officers. Stress responses during classroom-based scenario trainings were minimal, and not significantly related to stress responses experienced during realistic training scenarios or activity duty emergency calls.

Armstrong, J., Clare, J. & Plecas, D. (2014). Monitoring the impact of scenario-based use-of-force simulations on police heart rate: Evaluating the Royal Canadian Mounted Police skills refresher program. *Western Criminology Review* 15(1), 51-59.

Abstract: This research aimed to establish the extent to which scenario-based use-of-force training undertaken by the Royal Canadian Mounted Police (RCMP) replicates aspects of the essential physiological characteristics of real-life, high stress police activity. Using heart rate monitors, the physiological stress reactions of 132 officers were recorded while they completed one of four use-of-force training scenarios (including a control, where no use-of-force was required). Average heart rate information was used as a proxy measure for officer stress reactions at four time points during the scenarios: (a) 10 minute pre-scenario, (b) during the scenario when verbal contact was made, (c) during the scenario when physical contact was made, and (d) 10 minute post-scenario. Relative to pre- and post-scenario rates, heart rates were elevated during verbal and physical contact. No differences in this pattern were observed between scenarios, including the control

scenario. Relative to previous use-of-force simulation evaluations, the strengths of this design are the size and quality of the sample of participants, the collection of the stress proxy measure during the scenarios, and the inclusion of a control scenario. Overall, this examination demonstrated that the RCMP's current scenario-based use-of-force skills refresher program produces heart rate patterns that are consistent with the elevated physiological stress produced by real-world policing as demonstrated in prior field research.

Bennell, C., & Jones, N. J. (2004). The effectiveness of use of force simulation training: Final report. Retrieved September 5, 2004, from <http://www.cprc.org/tr/tr-2005-01.pdf>

Abstract: Many Canadian police agencies have recently incorporated use of force simulators into their training programs. Unlike earlier use of force instructional methods, such as range shooting, simulators are designed to provide more realistic training and to cover a broader range of use of force options. This latter approach accepts that mastering specific skills is a crucial component of any training regime, but the ability to apply those skills appropriately under stressful (i.e., sub-optimal) conditions is viewed as equally critical. In order for use of force simulation training to be successful, it must encompass several key principles empirically demonstrated to underlie effective training. These are components that relate to practice issues, retraining needs, information feedback, and degree of fidelity. However, use of force simulators can theoretically provide effective training to police officers. Indeed, empirical studies consistently demonstrate that simulation training is an effective means of teaching individuals a broad range of motor and cognitive skills. Objectively, simulation training has been demonstrated to increase the number of preventative actions taken by police officers, enhance shooting accuracy, reduce the number of shots fired to achieve an objective, increase the degree to which police officers use cover, and decrease the number of unjustified shootings. However, for use of force simulation training to reach its full potential, several important changes to the current training regime must be implemented, including increasing training time to the optimal level, introducing mastery of scenarios one at a time, spacing out simulator training and re-training sessions, and using instructor feedback and self-assessment.

Bennell, C., Jones, N.J., & Corey, S. (2007). Does use-of-force simulation training in Canadian police agencies incorporate principles of effective training? *Psychology, Public Policy, and the Law* 13(1), 35-58.

Abstract: Numerous police agencies in Canada incorporate use-of-force simulation training into their overall instructional regime. A prominent theory of learning, known as cognitive load theory, suggests that in order for this training to be effective, instructional methods must facilitate the acquisition and automation of task-relevant schemas without overwhelming the limited processing capacity of the learner. In this article, several instructional effects, proposed and supported by the cognitive load literature, are discussed. These training effects operate by minimizing unnecessary cognitive demands, by drawing on instructional methods that enhance schema acquisition, and/or by carefully managing the inherent complexity of the to-be-learned material. The argument is advanced that although use-of-force simulation training may be able to capitalize on

many of these effects, at present there is little evidence to suggest that it currently does. The authors conclude by discussing the urgent need to assess how the knowledge gained from cognitive load theory might serve to enhance the effectiveness of use-of-force simulation training.

Boyd, S. (1992). *Training effectiveness of interactive video systems for the use of lethal force decision making*. Unpublished doctoral dissertation, University of San Francisco, CA.

Abstract: This research investigated trainees' perceptions of training effectiveness of interactive video systems as compared to other types and methods of training that have been used in the past for training use of lethal force decision making. A survey research design was utilized and questionnaires were distributed to advanced law enforcement officers enrolled in courses which used interactive video as part of the course of instruction. The analysis of the data was done by drawing on inferential statistics using paired and group t-tests and descriptive statistics using means, standard deviations and percentages. Overall, the respondents gave a very positive indication of their perceptions of training effectiveness of interactive video for use of lethal force decision making. When compared to past training experiences, interactive video was perceived as more effective than any other training method listed. This research provides important data regarding the perceptions of training effectiveness while using interactive video systems. The opinions and perceptions of the professionals being trained using this relatively new and innovative technology will serve the profession well as they continue to enhance and reform old and sometimes out-dated methods of training for the use of lethal force decision making.

Brisenda, D., Venuti, A., Cataldi, C., Efremov, K., Intorno, E., & Fenici, R. (2015). *Real time imaging of stress-induced cardiac autonomic adaption during realistic force-on-force police scenarios*. *Journal of Police and Criminal Psychology* 30, 71-86.

Abstract: Operational stress is a complex matter. It requires a better understanding based on scientific knowledge of the psychophysiology of stress to improve training methods for officer's survival and prevention of post-traumatic stress disorders. This study aimed to assess the reliability and sensitivity of heart rate and of heart rate variability (HRV) as possible objective methods to quantify police operational stress (OS) in the real world and to differentiate the contribution of overlapping physical stress (PhS) during realistic training scenarios. 12-lead ECG of 113 police officers (POs) were continuously monitored during rest, daily activity (control state), and during 172 realistic tactical training scenarios requiring the use of force and/or of shooting firearms (OS, with or without associated PhS). Baseline physiological and psychological measurements were collected on the days of the training session. POs behavior and tactical outcome were rated by police instructors and documented with multiple video cameras. Real-time imaging of tactical stress was attempted with time-varying (TV) spectral HRV analysis (HRVa). Quantitative estimates of time-domain (TD), frequency-domain (FD), and nonlinear HRV parameters were computed from standard (300 and 120 seconds) and very short-term (60 and 30 seconds) intervals. The study was approved by a local Institutional Review Board. TV spectral HRVa provided dynamic imaging of transient cardiac autonomic adaptation

induced by OS and/or PhS. Quantitative estimation of the majority of TD and FD HRV parameters were not significantly affected by shortening the length of the explored time-segments from 300 to 30 seconds, as demonstrated by the intraclass correlation coefficient analysis (> 0.70). Discrimination analysis of HRV parameters allowed a differentiation between rest and stress conditions and between mental and physical stress. HRVa provides dynamic imaging and quantification of transient stress-induced autonomic adaptation in police officers during realistic tactical training scenarios.

Federal Law Enforcement Training Center (2004). *Survival scores research project; FLETC research paper.* U.S. Department of Homeland Security.

Abstract: The Survival Scores Research Project report concludes two years of research in which the research team developed, tested, and analyzed data comparing performance in a stressful law enforcement scenario to physiological and psychological measures. This research was conducted with oversight and approval of the Walter Reed Army Institute of Research Human Factors Research Review Board. A high-stress law enforcement scenario served as the basis for testing student performance. Basic training students from both the Criminal Investigator Training Program (CI) and Mixed Basic Police Training Program (MBPTP) were used. Testing was done just prior to student graduation from training. The students were subjected to repeated measures for both State and Trait Personality indicators for psychological assessments. The physiological indicators of heart rate, blood pressure, and cortisol were also monitored for comparison to 97 law enforcement skills performed and assessed in a stressful scenario. Background demographics to include a wide variety of experiences and training were collected, as were basic training scores for comparison. The data set thus included 368 variables available for analysis and comparison. The scenario was developed by subject matter experts, with the purpose of invoking maximum stress in a law enforcement situation. The scenario was captured entirely on film for later analysis and scoring. The scenario was analyzed as seven separate events that represent transition points in the level of stress invoked. The results of the research have provided a strong correlation between stress and performance. As stress increased, heart rate, blood pressure and cortisol levels increased. As expected, performance decreased. Serious performance deficiencies were identified. Impacts on cognitive decision-making are likewise reported with specific observations. Recommendations include methods to enhance or revise training methodologies and the continuation of research to more narrowly define potential development of a survival score index.

Groer, M., Murphy, R.L., Bunnell, W., Salomon, K., Eepoel, J.V., Rankin, B., White, K., & Bykowski, C. (2010). *Salivary measures of stress and immunity in police officers engaged in simulated critical incident scenarios.* *Journal of Occupational and Environmental Medicine* 52, 595-602.

Abstract: Objective: This research investigated the effects of a critical incident lethal force scenario on a panel of salivary biomarkers, measured at baseline and then at 10 and 30 minutes postscenario, in 141 law enforcement volunteer officers.

Methods: Officers were randomly assigned to two virtual reality scenarios. One scenario was brief and involved a police officer chasing a suspect on a motorcycle, confronting the suspect who draws a gun and shoots the police officer. The other scenario involved a lengthy chase by the police officer through a workplace of an armed perpetrator ultimately engaging in gunfire with the police officer. Saliva was analyzed for cortisol, secretory immunoglobulin A (sIgA), interleukin-6, and alpha-amylase concentrations.

Results: The “workplace” scenario produced the largest responses in biomarkers, with significant rises in cortisol, interleukin-6, alpha-amylase, and secretory immunoglobulin A. These data suggest that virtual reality can produce stress and immune effects.

Conclusions: This research suggests that virtual reality scenarios produce physiologic stress responses, mimicking occupational stress.

Helsen, W. F., & Starkes, J. L. (1999). A new training approach to complex decision making for police officers in potentially dangerous interventions. *Journal of Criminal Justice*, 27(5), 395-410.

Abstract: This article outlines the development and first empirical test of a new training approach to complex decision making of police officers in potentially dangerous situations. The program was developed for the Belgian Gendarmery in response to institutional changes reflecting an increased emphasis on safe interventions in the management of violence. It incorporates theoretical approaches to the training of decision expertise found within cognitive psychology. Twenty-four police officers, with moderate experience, participated in one of four training programs (ten hours each). Decision and intervention skills were assessed pre- and post-training through the use of slide and video simulations of real world intervention situations. The four training groups included: (1) classic training, (2) slide simulation training, (3) video simulation training, and (4) slide + video simulation training. Before training, officers took on average ten preventive actions to resolve situations. After training, the video-trained group increased to sixty preventive actions. Despite increased resolution skill, shooting efficiency remained low in all groups. Several recommendations have been made for the optimization of complex decision training with regard to the type and frequency of training as well as performance assessment.

Hundersmarck, S.F., Vanderkooi, G., & Vasicek, M. (2016), Police use of force: Transitioning policy into practice. *Police Forum* 3-9.

Abstract: There has been much debate over the use of force in police work. As a result of increased scrutiny by the public and the federal government, police agencies have responded by developing more comprehensive force policies. Despite the call for new policies, little development and innovation has occurred in addressing training. The authors argue that voluminous policies coupled with static training may further confuse use of force decisions by police officers. Police training must involve problem-based learning scenarios that involve assessment of situations even before a use of force decision is made.

Justice and Safety Centre. (2002). *The evaluation of a mobile simulation training technology - PRISim*. Richmond, KY: Justice and Safety Center, Eastern Kentucky University.

Abstract: To determine the effectiveness of a particular mobile simulation training technology, the National Institute of Justice (NIJ) Office of Science and Technology (OS&T) funded the Eastern Kentucky University (EKU) Justice and Safety Center (JSC) to evaluate the PRISim™ (Professional Range Instruction Simulator) system. The PRISim™ system is an interactive firearms/judgment simulation system, housed in a 36-foot gooseneck triple-axle trailer, that uses a Shootback™ cannon to fire a 33 grain plastic, 68 caliber nylon ball projectile at the trainee at appropriate points in the scenario. Data for the evaluation was obtained using a pre-training questionnaire, training assessment instrument, and a post-training interview. The study concluded that the system appears to be beneficial in building and/or enhancing skills that are arguably the most important for safety, i.e., accuracy, effective use of cover, avoiding the unintentional shooting or endangering of innocents and ensuring the shooting is justified. There were very few negative effects on the officers' skills as a consequence of the training. The only questionable area is whether the officer indexed properly (keeping the trigger finger off the trigger & outside of the trigger guard until the officer wants the weapon to fire) as a result of the PRISim™ training. Officer's attitudes towards the effectiveness of the PRISim™ system and training were overwhelmingly positive as identified through the pre and post assessments

Murphy, R.L. & Ross, D.L. (2009). *Virtual training systems and survival humanistic factors*. Presented at the meeting of the Interservice/Industry Training Simulation and Education Conference (I/ITSEC), Orlando, FL, 30 November-3 December 2009 .1-10.

Abstract: Virtual Training Systems and Survival Humanistic Factors is a Scientific study of Virtual Training and the Sympathetic/Parasympathetic Nervous System - How the survival response is activated, analysis of stress hormones, impact of physiological and psychological responses. The research project was conducted in Hillsborough County, Florida using 150 officers from five different agencies, including both City and County law enforcement officers. Officers that were exposed to the workplace violence scenario (4 minutes 59 seconds) displayed a much higher heart rate. The Mobile Eye clearly indicated that the officer cannot focus on the rear sight of the weapon under stress (elevated heart rate/high hormone levels). Officers that have activated the sympathetic nervous system (SNS) tend to interact with the scenario as opposed to those officers that are not at a high level of SNS. Officers exposed to the workplace scenario with the Survival Humanistic Factors Stress Inoculator (an overhead device constructed in the lab to provide added stimulus during the scenario such as vortex cannons to simulate touch or impact, red lights activated as a distraction, and flashes of bright lights to simulate sudden daylight) had higher levels of stress hormones. Officers that were exposed to the standard motorcycle scenario (1 minute 30 seconds) had less SNS activation and were less interactive during the scenario. This research emphasizes the necessity for the Virtual Simulation industry to review and understand how to produce stress in a virtual

environment and develop training courseware that offers the participants a meaningful training experience. Value of this study: The largest study to examine the sympathetic/parasympathetic nervous system in a training environment. The largest population of human test subjects tested using saliva as a method to determine the presence of stress hormones. The largest study to utilize survival humanistic factors and primal fears to stimulate the sympathetic nervous system.

Police Executive Research Forum (2015). *Re-engineering training on police use of force.* Washington D.C.

Abstract: This is the 28th report in PERF's Critical Issues in Policing series. PERF conducted three national conferences to discuss the use of force in American policing. This report summarizes PERF's second post-Ferguson conference, held in May, in which police leaders discussed how they are changing policies, training, and police "culture" with respect to use of force. This report, like others in the Critical Issues series, consists largely of the discussions by participants at the May 7, 2015 conference. Nearly 300 police chiefs and other law enforcement executives, federal government officials, academics, and representatives from policing agencies in the UK came together in Washington to share their views on what should be included in new approaches to training on use of force. This includes discussion of the so-called 21-Foot Rule regarding encounters with persons wielding knives, policies against shooting at moving vehicles, crisis intervention training to improve the police response to persons with mental illness who are behaving dangerously, and other new approaches to training of officers on use of force. PERF also fielded a survey of police agencies on their use-of-force training, reviewed research, and sent PERF staff to Scotland to observe their training firsthand.

Queen, C.R. (2016) *Effectiveness of problem-based learning strategies within police training academies and correlates with licensing exam outcomes.* (Unpublished doctoral dissertation). Western Michigan University, Kalamazoo, Michigan

Abstract: The training and education of police officers has recently come into question by many facets of the American general public and the mass media as well. Empirical research into the effects of police academy teaching methods is minimal. This study sought to assess the perceived effectiveness of problem-based learning (PBL) teaching strategies within police training academies in Michigan and sought to measure the effects of PBL strategies on the MCOLES Police Officer Licensing Examination mean scores in Michigan. A quantitative approach was utilized to compare the Michigan Police Officer Licensing Examination mean test scores between academies that formally adopted Problem-Based Learning (PBL) teaching strategies and police academies that have not formally adopted PBL (NPBL) teaching methods. Examination mean scores from official state records for a 16 year period (1999-2014) were statistically analyzed. The PBL trained police officers were found to have statistically significant higher scores overall on the licensing examination.

In addition, the perceptions of 231 Michigan police officers on their academy experiences were collected using an electronic survey to study the effects of PBL and NPBL teaching methods. The officers opined on their levels of agreement regarding seven areas of their

academy education: the level of the PBL instruction provided, their acquired problem-solving skills, their acquired critical thinking abilities, their acquired communication skills, their level of satisfaction of their academy classroom experiences, their beliefs that the education prepared them adequately to perform the requisite job tasks of a police officer in Michigan, and their overall satisfaction with their academy. The officers from the PBL police academy provided statistically significant higher levels of agreement than the NPBL academy officers in all seven areas.

Comments on three open-ended questions were evaluated to discover common themes. The officers provided their observations on the areas that were most and least valuable during their academy training, along with recommendations for change. The police officers identified the key factors of their academy training to be the actual learning methodologies employed, their individual classes, and practical scenario exercises. Recommendations for academy directors, instructors, and curriculum development specialists are provided.

Scharr, T. M. (2001). *Interactive video training for firearms safety*. *Federal Probation*, 65(2), 45-51.

Abstract: The purpose of the FATS System is to train law enforcement officers to think quickly and to react prudently when facing difficult or life threatening situations. Since many probation officers have had little training in this area, they have had few opportunities to develop or evaluate their own abilities in dangerous situations. Therefore, a study was conducted of the use of FATS by 36 Missouri probation officers. Twenty-nine officers completed the evaluation form. It was concluded from the evaluations that 97 percent of the officers reported that the overall training was effective. Before the training session many of the officers felt confident about their ability to perform. Once the training was completed, their attitudes changed. Many officers realized how difficult it is to react and respond quickly. This demonstrated that the training was effective in heightening the officers' awareness of life threatening situations, and the importance of being mentally prepared as well as knowledgeable in self-defense tactics. The overall response was favorable to the FATS System. The primary complaint involved the nature of some of the scenarios, because they were more law enforcement oriented. According to the author, if the scenarios were changed and designed specifically for probation officers, future training programs will be even more beneficial. 8 appendices of the actual study

General Sources for Use of Force Training/Policy

Alpert, G., and R. Dunham (2004). *Understanding police use of force: Officers, suspects, and reciprocity*. New York: Cambridge University Press.

Abstract: Understanding Police Use of Force focuses on the extraordinary and rare event that develops when physical force is used by the police. Whenever police officers come into contact with citizens, there is always a chance that the encounter will digress to one in which force is used on a suspect. Fortunately, most police activities do not result in the use of force, but those that do take on an interesting pattern of interaction between the

officer and the citizen. This volume presents a brief survey of prior research on police use of force as well as original data reported for the first time. The original data on police use of force include the Force Factor, or the relative use of force compared to the level of suspect resistance. The data also include the sequential order of the event and a view from the suspect's perspective. The book proposes a new conceptual framework for examining and assessing police use of force: the Authority Maintenance Theory.

Fridell, L.A. (2010). "Use-of-force policy, policy enforcement and training." In Dunham, R. & Alpert, G. (Eds.) *Critical issues in policing: Contemporary readings*, fifth edition. Prospect Heights, IL: Waveland Press, pp. 513-531.

Abstract: No abstract available

Klinger, D. (2012). *Police training as an instrument of accountability*. Saint Louis University Public Law Review 32(1), 111-121.

Abstract: The article discusses the significance of effective police training for reforming accountability and transparency for reducing police misconduct in the U.S. It provides information that lawful instruction and judicious behavior, such as avoiding corruption by not taking bribes, treating all citizens with equal racial profiling, and avoiding excessive force, is necessary for police objective. It mentions several ideal types that define excessive use of police force during interaction with citizens and recommend training to deal with the problem. It further discusses approaches regarding law enforcement for controlling police violence.

Klinger, D. (2010). *Can police training affect use of force on the streets? Affirmative evidence from the Metro-Dade violence reduction field experiment*. In Candace McCoy (Ed). *Holding police accountable*. Washington, DC: Urban Institute.

Abstract: Assesses a successful experiment to reduce the amount of force police officers use in their daily encounters with citizens. The study randomly assigned officers to an innovative training program and compared their performance with that of officers who received no training. The upshot? Training makes a significant difference and so does the type of training.

Lee, H., Jang, H., Yun, I., Lim, H., & Tushaus, D.W. (2010). *An examination of police use of force utilizing police training and neighborhood contextual factors: A multilevel analysis*. *Policing: An International Journal of Police Strategies and Management* 33(4), 681-702.

Abstract: Purpose - The purpose of this paper is to examine police use of force using individual, contextual, and police training factors, expanding prior research by including multiple police agencies in the sample, thus producing research findings that can be more easily generalized. Design/methodology/approach - The data for the current study were derived from several primary sources: the Interuniversity Consortium for Political and Social Research (ICPSR), Census, Uniform Crime Reports (UCR), Bureau of Labor Statistics (BLS), and 1997 Law Enforcement Management and Administrative Statistics (LEMAS). Findings - Among individual level variables, age and arrestee's resistance were significant explanatory factors. Violent crime rate and unemployment rate were

significant factors as the neighborhood contextual variables. Finally, in-service training was a significant organizational-level explanatory factor for levels of police use of force. Originality/value - The paper bridges the gap in research between contextual factors and police use of force. It also deepens our understandings of the association between organizational factors and use of force by incorporating police training into the analytical model.

Shjarback, J.A. & White, M.D. (2016). Departmental professionalism and its impact on indicators of violence in police-citizen encounters. *Police Quarterly* 19(1), 32-62.

Abstract: Citizens' beliefs that officers are employing unnecessary or excessive levels of force can quickly erode police legitimacy and can lead to severe consequences including loss of life, civil disorder, criminal prosecution, and large civil judgments. Although scholars have devoted more than four decades of research to identifying the correlates of police-citizen violence, relatively little study has focused on the relationship between departmental measures of police professionalism and violent outcomes between citizens and officers. The current study uses data from the 2003 Law Enforcement Management and Administrative Statistics survey to examine the impact of five measures of departmental professionalism—(a) agency commitment to education (associate's degree requirement); (b) the number of hiring or screening standards; (c) the total number of training hours (academy, field training, and in-service); (d) female representation; and (e) agency commitment to community policing—on two indicators of police-citizen violence—(a) citizen complaints alleging excessive use of force and (b) reported assaults on officers—across 526 large municipal law enforcement agencies. Results from ordinary least squares regression analyses show that only departmental commitment to education was related to the police-citizen violence indicators, as agencies that require an associate's degree experienced fewer citizen complaints of use of force and fewer assaults on their officers. The article concludes with a discussion of the implications of the findings for police policy and practice, as well as for our understanding of the organizational-level correlates of police-citizen violence.

Stickle, B. (2016). A national examination of the effect of education, training, and pre-employment screening on law enforcement use of force. *Justice Policy Journal* 13(1), 1-16.

Abstract: For decade's law enforcement agencies have attempted to reduce use of force incidents by increasing pre-employment standards, requiring higher education, and providing extensive training. The belief is that a better educated officer, who has passed extensive pre-employment standards with enhanced training, will perform better and—among other goals—be less likely to use force inappropriately. The present study continues research in this area by utilizing national LEMAS data with structural equation modeling to examine 21 variables related to pre-employment screening techniques, hours of training, and higher educational requirements compared to agency use of force complaints. Findings indicate that increased employment screening tests, higher education requirements, and augmented training hours lowers departmental use of force complaints.

Terrill, W. (2010). Police use of nondeadly force: From determining appropriateness to assessing the impact of policy.” In Candace McCoy (Ed.) Holding police accountable. Washington, DC: Urban Institute Press.

Abstract: Discusses nonlethal force policies, the difficulty of determining appropriate force across different standards, and policy implications.

Terrill, W. & Paoline, E.A. III. (2017) Police use of less lethal force: Does administrative policy matter? *Justice Quarterly* 34(2), 193-216.

Abstract: Scholars have long theorized that constraining police officer discretion via organizational policy improves decision-making. Empirically, prior research shows that more restrictive lethal force policies result in a reduction in the number of police shootings and in racial disparity. Yet, researchers have never examined the impact of less lethal force policies in relation to the full spectrum of less lethal force tactics. In addressing this research void, we examine 3,340 use of force incidents from three US agencies, each varying in terms of policy direction and restrictiveness. The results consistently show that officers working within the most restrictive policy framework used force less readily than officers who operated within more permissive policy environments. Hence, police administrators wishing to reduce coercion should consider the potential effect that a more restrictive policy may have on such behavior.

Terrill, W. & Paoline, E.A. III (2010). *Non-lethal force by police: The various lenses through which appropriateness is examined.* In Johannes Knutsson and Joseph Kuhns (Eds.), *Police use of force: A global perspective.* Santa Barbara, CA: Praeger publishing.

Abstract: No abstract available

Crisis Intervention Team Training

Bibliography of Reports on CIT Published in the Scholarly Literature (1999 – 2015), Crisis Intervention Team (CIT) International Research Committee, August 2014.

Overview: A compilation and overview of research on CIT between 1999 and 2015.
<http://citint2.cloudaccess.net/CITINT/PDF/CITResearchBibliographyofPublishedReportsAugust2015.pdf>

A Comprehensive Review of Extant Research on Crisis Intervention Team (CIT) Programs, Compton, Bahora, Watson, et al. 2008

Abstract: Given the enthusiasm of advocates, law enforcement/public safety personnel, and mental health professionals for the CIT program, and in light of the increasing pace of implementation of this complex collaboration in a multitude of localities across the country, the authors of this review seek to provide a systematic summary of the very limited available research that has been conducted on CIT to date and to comment on future avenues for research.

<http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.562.4881&rep=rep1&type=pdf>

Crisis intervention Team Training for Police Officers Responding to Mental Disturbance Calls, Teller, Munetz, Gill & Ritter, February 2006.

Abstract: In recognition of the fact that police are often the first responders for individuals who are experiencing a mental health crisis, police departments nationally are incorporating specialized training for officers in collaboration with local mental health systems. This study examined police dispatch data before and after implementing a CIT program to assess the effect of the training on officers' disposition during calls.

<http://ps.psychiatryonline.org/doi/pdf/10.1176/appi.ps.57.2.232>

Improving Police Response to Persons with Mental Illness: A Multi-Level Conceptualization of CIT, Watson et al., 2008.

Abstract: The large numbers of people with mental illness in jails and prisons has fueled policy concern in all domains of the justice system. This includes police practice, in which initial decisions to involve persons in the justice system or divert them to mental health services are made. One approach to focus police response in these situations is the implementation of CITs. This paper reviews literature on CIT and presents a conceptual model of police response to persons with mental illness that accounts for officer, organizational, mental health system, and community-level factors likely to influence implementation and effectiveness of CITs and other approaches.

<http://citintz.cloudaccess.net/images/stories/CIT/Research/watson%20et%20al%202008%20intl%20j%20of%20law%20and%20psych.pdf>

Police Perspectives on Responding to Mentally Ill People in Crisis: Perceptions of Program Effectiveness, Borum et al., 1998

Abstract: This study samples sworn police officers from three law enforcement agencies, each of which has different system responses to mentally ill people in crisis. One department relies on field assistance from a mobile mental health crisis team, a second has a team of officers specially trained in crisis intervention and management of mentally ill people in crisis, and a third has a team of in-house social workers to assist in responding to calls. Calls involving mentally ill people in crisis appear to be frequent and are perceived by most of the officers to pose a significant problem for the department; however, most officers reported feeling well prepared to handle these calls.

<http://citintz.cloudaccess.net/images/stories/CIT/Research/borum%20et%20al%201998%20behavioral%20sci%20%20law.pdf>