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A Systematic Review of the Effectiveness of Law Enforcement Training to Reduce the Deaths of Mentally Ill Citizens in Altercations in the United States

By

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By

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Doctorate of Pharmacy

Hampton University School of Pharmacy

2013

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Abstract

A Systematic Review of the Effectiveness of Law Enforcement Training to Reduce the Deaths of Mentally Ill Citizens in Altercations in the United States

By Nuri Tawwab, PharmD, PhC

Introduction: In 2015, 991 people were killed by law enforcement officers in the United States, and 254 of them had signs of mental illness. To combat this, since 1988, many police departments have required officers to complete Crisis Intervention Team (CIT) trainings. This systematic review examines the results of the trainings nationally to see if they are significantly effective in reducing the number of deaths of mentally ill citizens in altercations with law enforcement. **Methods**: Retrospective and prospective studies from search engines including PubMed and EBSCOhost were collected and were then narrowed down to the most relevant studies based on exclusion criteria. **Results**: Ten articles directly related to studies on reducing the deaths of mentally ill citizens were found. Significant information included P-values of less than 0.05. **Discussion**: After reviewing the 10 articles, clear evidence showed that CIT training teaches officers alternative behavior for dealing with mentally ill offenders, including increasing referrals to mental health facilities and fewer arrests. This can directly lead to a reduction in shootings, which has been a public health problem. These findings validate the suggestion that more police forces should invest in CIT training.

Key Words: Mental health, Law enforcement, Training, Effectiveness, Systemic Review

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Illustrations:

Chapter 1: Introduction

In the national news, police altercations have sparked what has arguably been police brutality. In 2008, 344,000 people in the U.S. reported being subjected to physical force by law enforcement (Eith & Durose, 2011). In 2013, 100,000 reports of physical force by law enforcement led to emergency room visits (Compton, M. T.,2014). In 2015, 991 people were fatally shot by law enforcement, and this death rate was similar in 2016, as 963 people had been fatally shot by police (Kindy, 2016). This type of policing affects many groups in different ways, leading to increased public health concerns. Fear of being fatally shot has led to public health issues for blacks and Latinos including post-traumatic stress disorders (Geller, Fagan, Tyler, & Link, 2014). This type of policing has also led to preventable medical emergencies because injectable legal medicine users fear carrying clean needles and encountering officers who may think they are using illegal substances (Lund, 2012). One vulnerable group that fatal policing has affected is the mentally ill. In 2015, of the 991-people shot, 254 of them had confirmed mental illness, per the *Washington Post*, and the remaining cases were either not identified as mentally ill or unknown (Kindy, 2016). These 254 individuals account for 25% of the deaths by law enforcement in 2015. By addressing this issue with preventable measures, law enforcement may be able to reduce the deaths of many mentally ill citizens (Compton et al., 2009). There seems to be a knowledge gap about how to end fatal shootings of mentally ill citizens. Police agencies throughout the country have continually added training, called Crisis Intervention Teams (CITs), to address the mentally ill population, such as in Birmingham, Alabama (Eith & Durose, 2011). Other states like Louisiana have relied on voluntary health care professionals like psychologists to assist with the mentally ill population (Eith & Durose, 2011).

While there is a systemic review synthesis available that describes how law enforcement is working to create training for police departments, like CITs (Cordner, 2006), there is limited literature addressing how effective these additional law enforcement components are in reducing the death of mentally ill citizens nationally. Many questions regarding the effectiveness occur because the police trainings have not been shown to be effective (Cooper, Moore, Gruskin, & Krieger, 2005). Literature further suggests that the lack of effectiveness is because the trainings are incorrectly geared solely toward feelings about mentally ill citizens and not enough on case scenarios to develop skills to use later when addressing this population (Cooper, Moore, Gruskin, & Krieger, 2005). Furthermore, early research suggests that current training may not change the use of excessive force without some CIT training, and the length of training should be extended longer than the one day that many police academies currently offer (Hails & Borum, 2003).

The purpose of this review is to explore how effective the mental health training officers receive nationally is in reducing the killing of mentally ill citizens. To do this, I will look at studies related to police trainings across the country that provide data on the results of the trainings. In addition to exploring the effectiveness of the trainings, such as CITs, I will suggest possible ways to make the trainings more effective if they are not found to be effective. Topics related to mental health play a significant role in public health. Identifying ways law enforcement can reduce the deaths of mentally ill citizens in this country during altercations can be used to update police training policies nationally.

Definition of Terms:

-Law enforcement and police: Police exclude those who have not gone through a standard police academy, such as private sector security guards at a mall.

-Killing and shootings: Refers to people being shot to death and/or not living long after being shot. When I say, the police killed someone, this is the same as saying they shot someone, as I am addressing lethal force.

-Lethal force: other deadly acts like choking or disabling someone with a taser by an officer are not included as lethal force in this study.

Chapter 2: Review of the Literature (ROL)

Introduction:

To improve the outcomes of altercations between police officers and mentally ill citizens, many law enforcement agencies have added mental health training to their current police training programs. The goals of training are most commonly stated as (Reuland, Draper, & Norton, 2009):

1. Reducing the risk of injury to police and PMI (people with mental illness) when dealing with mental health-related incidents;
2. Improving awareness among front line police of the risks involved in interactions between police and PMI;
3. Improving collaboration with other government and non-government agencies in the response to, and management of, mental health crisis incidents;
4. Reducing the time taken by police to deliver the PMI into the health care system;
5. Reducing arrests by diverting PMI to the health care system, thus having less penetration into the justice system;
6. Reducing recidivism; and
7. Improving therapeutic outcomes

In reviewing, different articles, common stakeholders in this effort include law enforcement agencies as well as families and friends of those with mental illness (Reuland, Draper, & Norton, 2009). To better understand how police are being trained to handle altercations with mentally ill citizens, this literature review looked at many programs and studies from across the country and globe. The review includes a summary of the most useful and significant information gathered from the articles about why there is a need to examine how effective police training is in reducing the deaths of mentally ill citizens. In conducting the research, studies and articles were reviewed and placed in sub-categories that related to 1) the current state of knowledge, 2) criminalization of mentally ill citizens, 3) limited training still a possibility, and 4) specific police trainings that are currently available pertaining to mental health populations.

Body of Review of Literature:

Victimization of mentally ill citizens

I reviewed 10 studies about police victimization of mentally ill citizens. Attitudes of the officers and community contribute to how this population is treated during altercations. Knowing the truth about mentally ill offenders can help in finding the most effective training to reduce police killing of mentally ill citizens.

In the state of Maine alone, 58% of the civilians killed by police since the year 2000 have had signs of mental health issues (Feldman, 2015). Interestingly, most of these victims were not carrying firearms (Feldman, 2015). The age range of the mentally ill offenders most commonly spanned from 24-36 years old (Feldman, 2015). More than 25% of the individuals in 2015 had prior suicidal history. The items carried by these citizens included screwdrivers, pens, and even spoons. Today, prisons contain more than 10 times the number of mental health patients than state psychiatric centers (Compton et al., 2009).

In the last few decades, officers have encountered more mentally ill citizens than previously because mentally ill people are allowed to freely reside in society. Prior to the 1960s, most mentally ill citizens, especially those with severe mental disability, were kept in psychiatric hospitals (Wood, Swanson, Burris, & Gilbert, 2011). After the 1960s, this changed when the "deinstitutionalization" of mentally ill citizens started. Because of this change, many vulnerable mentally ill people were left to care for themselves in society without the proper treatment that they would have received in a psychiatric hospital (Tucker, Hasselt, & Russell, 2008; Borum, 2000). Regarding the role of police officers when dealing with the mentally ill, some people may

argue that police officers exist simply to enforce the law of the land, and many would like to believe that they are here only to decide who gets arrested and who gets released (Canada, Angell, & Watson, 2010). Although police are not technically mental health professionals—most police officers are not licensed psychologists or psychiatrists—they are the first responders when they are called to scenes involving this population (Canada, Angell, & Watson, 2010). In fact, in some circles, police are referred to as the "psychiatrists in blue" (Marley & Buila, 2001).

Many mentally ill citizens deal with an extra burden to maintain behavior that is acceptable to society. In many cases, family members of the mentally ill have said that they were harmful to themselves and could not remain in residential facilities because they would go against medical advice (Kelly, 2016). In altercations, some mentally ill people have left suicide notes indicating that they wanted to die while also provoking officers (Kelly, 2016). Because of the difficulty of engaging with mentally ill citizens, the stereotype is that they can be the most violent and difficult people to handle in altercations. In fact, the opposite is generally true. Mentally ill citizens are not more likely to commit crimes than non-mentally ill citizens (Borum, 2000). Those with mental illness are victimized more than others as well, especially those with schizophrenia, which causes more interactions with police than non-mentally ill citizens (Centers, 2017). In 2006, a study in Indiana showed that of all the calls law enforcement received for mentally ill citizens, only 1% of calls for service were for "serious crimes" (Wells & Schafer, 2006).

Current Training

I reviewed nine articles related to the training of officers and mental health teams who work specifically with mentally ill citizens. Having a thorough understanding of the current

training available will allow me to investigate how positive the outcomes of these trainings have been and which will be best in showing how effective the trainings are in reducing the deaths of mentally ill citizens.

After reviewing census data, I found that of the 18,000 law enforcement agencies in the country, only around half have 10 or more personnel on staff who are trained handle mental health offenders (Reuland, Draper, & Norton, 2009). The training for these officers usually falls under one of three models (Hails & Borum, 2003):

Police-based specialized police response:

In this model, designated officers act as the first-line response to mental health crises. This officer or group of officers has received special mental health training that teaches them how to handle hostile incidents in a community, and they act as contacts for the local mental health departments. One of the most common police-based specialized trainings across the country is Crisis Intervention Teams (CITs). The trainings for CITs are 40 hours in length, and officers study mental health conditions, medications, and available mental health resources in the local community. Laura Usher, a program team member of the National Alliance on Mental Illness (NAMI), says, "A big chunk of the training is verbal de-escalation skills" (Kohrt et al., 2015). CIT training seems to be an effective method that mentally ill citizens respond to. Prior to CITs, training consisted of teaching officers to demand compliance to control the situation. This technique often left officers with the option to draw their guns upon approaching the mentally ill citizens. A mentally ill citizen in response might react in a way that could be "misinterpreted as a threat and quickly escalate to violence, CIT is meant to prevent this" (Kohrt et al., 2015).

Police-based mental health response:

This model is different from the first because it relies on mental health professionals as well as officers. Law enforcement hires mental health professionals to assist officers either from a distance or at the actual scene with a mentally ill citizen (Krameddine & Silverstone, 2015). An example of this model is found in Birmingham, Alabama. The city hires mental health professionals through what they call the "correction service officer (CSO)" program (Wells & Schafer, 2006). The program was started in 1976, and the mental health professionals respond to all social problems in the city, including "elder abuse, domestic violence and mental illness" (Lipson, Turner, & Kasper, 2010). They have a training program that consists of 12 hours of training on mental health and crisis intervention. The team is available from 8:00 am to 10:00 pm during the week as they are in the main precincts throughout the city, and CSOs take turns working on weekends around the clock (Steadman, Deane, Borum, & Morrissey, 2000). Since they are not an independent group, they report to the police chief. They dress in regular clothes, and although they are "sworn officers," concerns arise that their safety may be put in danger because they are not allowed to carry a weapon or make an arrest (Compton & Kotwicki, 2007). As stated in the introduction, these programs improve the possibilities of reducing the death of mentally ill citizens, but evaluations of their success are limited (Steadman, Deane, Borum, & Morrissey, 2000).

Mental health-based specialized mental health response:

In this model, mental health teams in the community work independently of law enforcement. They have "cooperative agreements" with the police, but they are part of the local mental health department rather than the police (Hails & Borum, 2003). Just like the police-based mental

health response, they may consult with officers, but they have independence. One example of this model is found in Knoxville, Tennessee. There, they have the Knoxville Mental Crisis Unit (MCU), which started in 1991 and has civilian mental health professionals who work around the clock responding to mental health crises (Krameddine & Silverstone, 2015). Although they have an agreement to collaborate with the police, the mental health team remains "institutionally separate" and recommends treatment referrals at the scene. In reviewing these models, one study found that when officers and mental health professionals work together, the results are a 75% increase in referrals of mentally ill citizens to treatment facilities with only 5% of incidents leading to arrest (Steadman, Deane, Borum, & Morrissey, 2000).

Limited Training still a Possibility

Although law enforcement agencies have many training programs across the nation, surveys have shown that officers feel they still lack the necessary training. In fact, 50% of the killings by officers in departments with mentally ill crisis divisions, like the models mentioned above, resulted in the deaths of the mentally ill individuals. The responding officers admitted that they were not properly trained to interact with mentally ill citizens (Krameddine & Silverstone, 2015). Usher has suggested that one contributing factor is "the lack of effective training for police officers" (Lucas, 2016). In addition, Peter Scharf of the LSU School of Public Health and Justice agrees that officers need additional training and that it will "reduce arrests for relatively small infractions and help cops build a baseline of understanding about what mentally ill people experience—valuable knowledge when thrown into a volatile encounter with someone during a crisis" (Lucas, 2016). Scharf then goes on to further express limitations: "'cops have to make a split-second decision particularly when dealing with someone who is believed to be armed and agitated. Should police get this training? Yes,' Scharf said. 'But just like you can't do

neurosurgery with eight hours of training, you can't expect a cop to be able to learn to talk a gun out of the hands of someone, with such limited training'" (Lucas, 2016). Further training may be needed in addition to the models, specifically training that is effective in reducing the deaths of mentally ill citizens.

Summary of Current Problem and Study Relevance

Law enforcement is working to train its officers in the best way possible to reduce the deaths of mentally ill citizens during altercations. Police departments have trained their officers to be more equipped to handle these members of the population. Law enforcement has also gone as far as hiring special units of mental health professionals to assist them. The situation remains that mentally ill citizens are still dying at the hands of law enforcement officers. In 2015 and 2016, mentally ill citizens comprised one quarter of deaths by police altercation (Kindy, 2016). The problem is that these trainings have not shown how effective they are in reducing the deaths of mentally ill citizens (Cooper, Moore, Guskin, & Krieger, 2005).

Chapter 3: Methodology, Data Collection, & Analysis

Introduction

For the systemic review, I looked for data that show the effectiveness of the CIT programs' ability to reduce the deaths of mentally ill citizens in altercations with law enforcement. I looked for research that was national in scope and specifically indicated measurable reductions in the death of mentally ill citizens.

Literature Search Methodology

This was entirely a retrospective study where I looked at published studies on CIT programs and not reports of plans for future success of potential programs. I wanted to know what has been tried in the field and how successful it has been. This literature search was done guided by PRISMA's (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) 27-point checklist provided by Emory University. Not all checkpoints of the PRISMA checklist were used; exclusions included protocol and registration of any protocol that existed and any additional analyses like sensitivity or subgroup analyses.

A descriptive review was completed by searching various online sources. Many sources required payment, but because of student access through Emory University, I could get studies from sites like PubMed and EBSCOhost at no charge. I used these sources because of their credibility in providing critical up-to-date information that would assist me with finding an answer to the projected question. Various search terms were used, including "policing," "excessive force," "law enforcement," "police," "mentally ill," "healthcare," "law," "emergency," "psychological," "unarmed," and "training." As the results became consistent, I

searched narrower terms, including “weapons,” “race,” “bias,” “stereotyping,” “psychologist,” “psychiatrist,” “drug overdose,” “Crisis Intervention Team,” “CITs,” and “threatening.”

In addition to studies found on these sites, I also looked at multiple news articles that *The Washington Post* has published. Since 2015, *The Washington Post* has been collecting national data from law enforcement agencies to show how many individuals have died at the hands of law enforcement. In this database, they track how many offenders had either signs of mental illness or were documented as mentally ill. In addition to searching for electronic sources, I also contacted Laura Usher of NAMI on December 10, 2016, to verify the data I had collected and reported in my literature review. I initially located her through LinkedIn, and we communicated by phone from that point.

Tracking the data was initially done with Endnote, but it became complicated as it was time-consuming to learn the program. Instead, I switched to Bibme.org to keep track of articles I found. I initially found 88 articles by using the search terms mentioned earlier that related to my topic. Of those, 15 were duplicates, so I excluded those. Of the remaining 73, 30 were removed because they turned out to be editorials articles without any primary evidence or intervention. Of the remaining 43, 33 were excluded because they did not exclusively relate to my purpose statement. That left 10 articles that met the inclusion criteria. A flow chart is presented in Figure 1. Examples of search strings included “effective CIT program reducing death” and “reducing the death of mentally ill with law enforcement through CIT.”

The inclusion and exclusion criteria for the work I selected was very specific. For the data range, I included reviews no older than 12 years to show that the data was as current as possible. I made sure the study methodology clearly showed some type of intervention with

CITs. The study had to discuss the reduction of deaths in the results of the articles that were chosen, even if it was not the primary goal of the article. The point of view from law enforcement was important as well, so sources through law enforcement reviewers were sought out. I excluded any articles that seemed biased and blamed the mentally ill offender without any form of accountability for the officer. The review focused mostly on domestic studies because this is where the problem is most prevalent.

Data extraction and quality assurance

From each qualified study, data was extracted and placed in Table 1. It was organized by author name, article title, year of publication, and methodology. I organized it in a Word document with eight variables:

1. Study design
2. Sample size
3. Sample type (convenient or random)
4. Significant evidence of the reduction in deaths of mentally ill citizens
5. Gender of citizens who had altercations with police
6. Race of offenders and officers
7. Author

Most studies explained results throughout the article while some had the results at the end. The data was recorded and pertinent results were documented throughout. To make sure the data was of acceptable quality, a double entry data extraction was completed. Most data were found between August 2016 and November 2016. In December 2016, a second data extraction was completed. The results of both extractions came back with 100% accuracy.

Analysis plan

The analysis plan included extracting data from articles at an average of 4-6 articles per week. During the winter break from classes, more data was reviewed. After a while, common

and major themes started to show up, and this allowed me to narrow my searches and find the exact data needed.

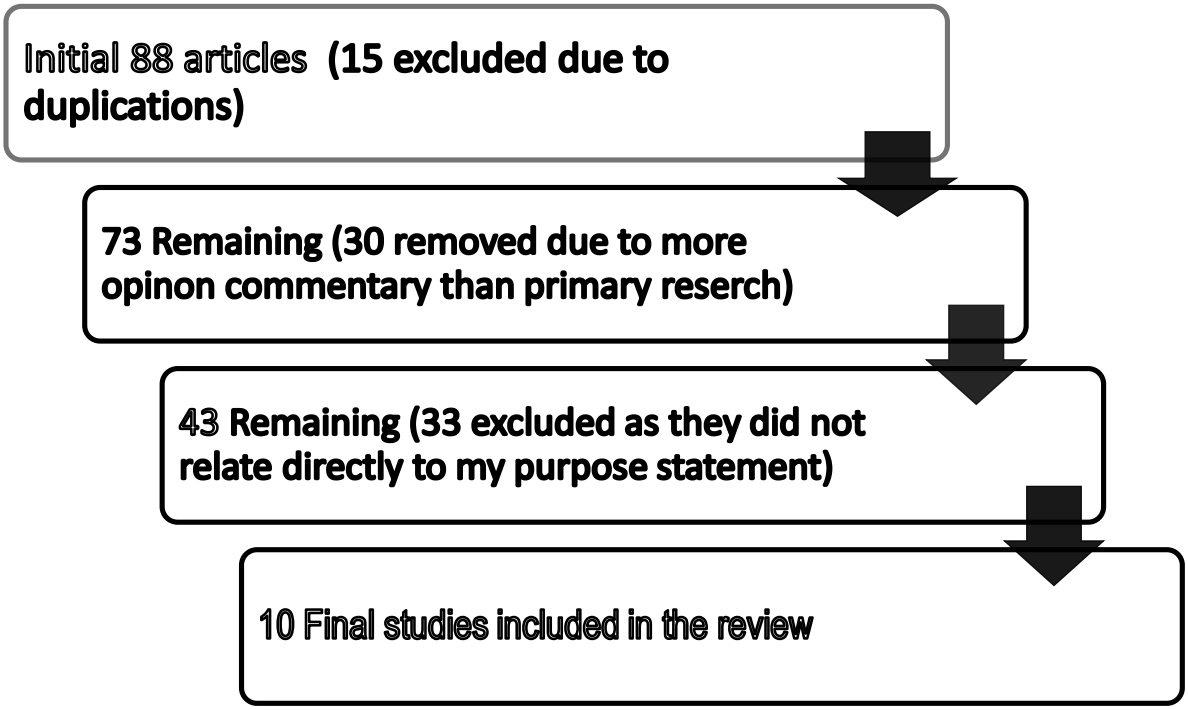

Figure 1- Flow diagram for systematic review of retrospective studies regarding the effectiveness of CIT programs in reducing the deaths of mentally ill citizens from search engines including Pubmed, EBSCO, and other sources from 2007 to 2017.

Chapter 4: Results

In research from 2016 to 2017, a total of 10 studies met the inclusion criteria for this systematic review. Search engines brought up many related items for this topic. See Figure 1 for detailed information on the exclusion process that finalized the studies reviewed. As per PRISMA guidelines, a summary of the key characteristics of each study can be found in detail in Table 1: Characteristics of 10 Studies of Reported Effectiveness of Crisis Intervention Teams throughout the US to reduce the death of mentally ill citizens. The summaries include study design, population size, sample type (convenient or random) reduction of deaths of mentally ill citizens, author, location of study, gender, and racial background of officer or offender. There was no pattern related to religion, income, or rural vs urban. A rural vs urban comparison would be helpful because CIT programs started in large cities like Memphis, Tennessee, in 1988 (Adelman, 2003), and having data on small rural areas could possibly draw further patterns.

The characteristics of the study designs varied. Of the 10 studies, three were retrospective (Teller, Munetz, Gil, & Ritter, 2006; Compton & Kotwicki, 2007; Tyuse, Cooper-Sadio, & Underwood, 2016. Two of the studies were quasi-experimental (Ellis, 2014; Cuddeback et al., 2016, and two articles focused on prospective studies (Compton, 2014; Strauss et al., 2005). Four studies collected data via qualitative and quantitative research {Canada, Angell, & Watson, 2011; Tyuse, Cooper-Sadio, & Underwood, 2016; Compton et al., 2009; Watson, Angell, Morabito, & Robinson, 2008). One study used an incident-based descriptive process evaluation (Helfgott, Hickman, & Labossiere, 2016). Although all the studies included in this review were within the United States, they occurred in different states, including Ohio, Florida, Georgia, North Carolina, Illinois, Missouri, Washington, and Kentucky.

There were 14,528 participants in all the studies included in the review. The sample size ranged from 20 to 10,004 per study. In addition to the sample size, six studies included female officers or female offenders (Ellis, 2014; Compton, 2014; Cuddeback et al., 2016; Compton et al., 2009; Strauss et al., 2005; Watson, Angell, Morabito, & Robinson, 2008). Of the studies sampled, only four were characterized as random while the rest were convenient (Teller, Munetz, Gil, & Ritter, 2006; Tyuse, Cooper-Sadio, & Underwood, 2016; Helfgott, Hickman, & Labossiere, 2016; Straus et al., 2005). Although mentioned in five articles, race was not a large factor (Ellis, 2014; Compton, 2014; Cuddeback et al., 2016; Compton et al., 2009; Watson, Angell, Morabito, & Robinson, 2008).

Although all 10 studies were about the effectiveness of crisis intervention teams' ability to reduce deaths, only eight focused on the complete reduction of deaths in these programs (Teller, Munetz, Gil, & Ritter, 2006; Compton, 2014; Tucker, Hasselt, & Russell, 2008; Tyuse, Cooper-Sadio, & Underwood, 2016; Compton et al., 2009; Helfgott, Hickman, & Labossiere, 2016; Straus et al., 2005; Watson, Angell, Morabito, & Robinson, 2008). Teller, Munetz, Gil, and Ritter (2006), Ellis (2014), Cuddeback et al. (2016), Strauss et al. (2005), and Watson, Angell, Morabito, and Robinson (2008) all completed pre- and post-studies. Their focus was how the intervention of a CIT program affected the officers' decisions to use less deadly force when addressing mentally ill citizens before and after the CIT training. Three of the studies' results also included an increase of officers referring mentally ill citizens to health facilities instead of acting on traditional behavior, which has led to the death of citizens (Compton, 2014; Helfgott, Hickman, & Labossiere, 2016; Strauss et al., 2005).

Table 1. Characteristics of 10 Studies of Reported Effectiveness of Crisis Intervention Teams throughout the US in reducing the death of mentally ill citizens.

Author	**Study Design**	**Sample Size**	**Sample Type (convenient or random)**	**Addressed purpose**	**Location of study**	**Genders ID Involved**	**Racial Background**
Jennifer Teller (2006)	Retrospective, two years before and after CIT training implementation	10,004 offenders reported	Random	Yes, P<0.05, increase of offenders transported for psychiatric care	Akron, Ohio	Non-discussed factor	Non-discussed factor
Horace Ellis (2014)	One group, pre-test/post-test, quasi-experimental study	Initially 28 police officers, with only 25 officers completing the study	Convenient	NO, MIAQ did not detect a reduction of deaths	Miami Dade-County, Florida	80% (20) male officers	72% Hispanic, 16% white

Michael Compton (2014)	Retrospective and prospective descriptive study	180 officers (91 with CIT training and 89 without); 1063 encounters	Convenient	Did not show reduction of deaths, but did show significant increase of psychiatric referrals	Savannah and Atlanta, Georgia	135 male officers (75%)	93 officers (52%) Caucasian, 4% African American, 3% Hispanic, Native American and Pacific Islander
Gary S. Cuddeback, PhD (2016)	quasi-experimental study design	79 officers (47 received CIT & 32 received segmented training)	Convenient by law enforcement agencies per staffing needs of that agency	Yes, but not deaths from excessive force	Rural North Carolina	Male Officers: (traditional 37) (Segmented 28)	CIT training 31 white, 16 black
Kelli E. Canada, Beth Angell, Amy C. Watson (2011)	qualitative research design	216 officers	Convenient	Yes	Chicago, Illinois	Not disclosed	Not disclosed

Sabrina W. Tyuse; Cooper-Sadlo, S., & Underwood, S. E. (2016)	Retrospective Quantitative	352	Random	Yes, more transports to the ED instead of deadly force, by 50%	St. Louis, Missouri	Race and Gender were coded as dichotomous variables	Race and Gender were coded as dichotomous variables
Michael T. Compton (2009)	Quantitative	135 officers, 48 CIT trained, 87 non-CIT trained	Convenient	Yes, CIT officers chose less escalation methods with this population	Southeastern states of America	CIT officers (33 were male), non-CIT officers (72 were male)	CIT (33/48 black), non-CIT (56/87 black), CIT (white, 11), non-CIT (white, 23).
Jacqueline B. Helfgott (2016)	Incident-based descriptive process evaluation	3029 cases	Random	Yes, increase in community relations and increase in de-escalation	Seattle, Washington	Not discussed	Not discussed
Gordon Strauss (2005)	6 months' prospective descriptive evaluation study after CIT implementation	485 mentally ill patients studied	Random	Yes, officers improved identification of mentally ill citizens.	Louisville, Kentucky	58.7% men, 41.3% women	Non-recorded figures

Amy C. Watson (2008)	Qualitative method through semi-structured interviews	20 recruited and completed interviews	Convenient	Yes	Chicago, Illinois	Offenders (16 male, 80%)	(10, 50%, African American), (6, 30% white)
Annotated bibliography of the articles reviewed is included in the appendix.							

Chapter 5: Discussion

This section will discuss the major findings of the review in context, share limitations of the studies, and give future recommendations for this public health issue. All studies reviewed targeted the effectiveness of CITs in reducing the number of deaths of mentally ill citizens. One of the major themes in 8 of the 10 articles was the positive change in the attitude of officers and their ability to adjust their behavior to handle the mentally ill population. In addition to being a direct action in the reduction of deaths, as one article stated, positive attitudes do lead to compassion, and, as a start, can lead to decisions that result in less lethal behavior (Ellis, 2014). Another common theme was the increase of immediate referrals to mental health facilities following altercations (Teller, Munetz, Gil, & Ritter, 2006; Watson, Angell, Morabito, & Robinson, 2008; Canada, Angell, & Watson, 2011; Compton et al., 2009). Again, this did not mean a direct reduction in the number of deaths, but indirectly, an increase in referrals to mental health facilities increases alternatives to the problem (Kindy, 2016). A third theme seen in three articles was related to pre- and post-CIT evaluations and their effects vs retrospective studies in their ability to draw patterns related to the purpose of the review (Teller, Munetz, Gil, & Ritter, 2006; Compton, 2014; Cuddeback et al., 2016). In these articles, there was not just one retrospective or prospective study. From my observation, having a pre- and post-study of the sample population provided measurable numbers to show a reduction and change in killings. This was most clear in the article with Akron, Ohio police, which found a statistically significant reduction in killings ($p < .05$). (Teller, Munetz, Gil, & Ritter, 2006).

Although the studies in the articles used logical methods and sources, there were still limitations. One such limitation was with the sample type, as illustrated in Table 1. In many articles, the sample type was not random but convenient (Ellis, 2014; Compton, 2014;

Cuddeback et al., 2016; Canada, Angell, & Watson, 2011; Compton et al., 2009; Watson, Angell, Morabito, & Robinson, 2008). Convenient sampling has a greater opportunity of being biased than random sampling (Lund, 2012) because it allows the author to either underrepresent or over represent the studied sample, even if it is unintentional. Since more than 50% of the 10 articles that were used for this review, per the exclusion guidelines in Figure 1, were convenient sampling, this impacts the findings of this review by allowing the possibility of bias.

Another limitation of the articles was the lack of gender inclusion (i.e. male and female) in the sample (Teller, Munetz, Gil, & Ritter, 2006; Ellis, 2014; Compton, 2014; Canada, Angell, & Watson, 2011; Tyuse, Cooper-Sadio, & Underwood, 2016; Helfgott, Hickman, & Labossiere, 2016; Kindy, 2016) population. Gender was an important factor to look at in reducing the deaths of mentally ill citizens because most of the officers who have killed mentally ill citizens have been males, per the *Washington Post* statistics (Kindy, 2016). Having this lack of gender diversity has an impact on the study because it leaves out the possibility that officers who identify as female or other may have skills they develop after CIT training that helps them make alternative decisions to killing mentally ill citizens.

Improving CIT trainings so that they directly and significantly reduce the deaths of mentally ill citizens would be a great change for communities and police policy. One must admit, the implementation of a program does require possible changes that must occur on police forces that will require funding. Currently, most CIT programs are in larger cities, and the ability to fund these programs in smaller rural towns with smaller forces has been an issue (Compton & Kotwicki, 2007).

After reviewing all the studies included in the review, there is evidence based on the results that CITs can effectively reduce the deaths of mentally ill citizens during altercations with law enforcement (Teller, Munetz, Gil, & Ritter, 2006; Tucker, Hasselt, & Russell, 2008; Tyuse, Cooper-Sadio, & Underwood, 2016; Watson, Angell, Morabito, & Robinson, 2008). One recommendation is for more pre- and post-study formats because retrospective studies do not give readers the most current data (Teller, Munetz, Gil, & Ritter, 2006; Compton, 2014; Tyuse, Cooper-Sadio, & Underwood, 2016). Trending crimes and more common situations that officers deal with change yearly, for example, the heroin and methamphetamine epidemic the country is currently facing. Another recommendation is that CIT programs gather knowledge from officers about the time it takes for officers to conclude altercations with mentally ill citizens. In some studies, local police explained that they were still not fully able to efficiently de-escalate situations with mentally ill citizens in a timely manner (Cuddeback et al., 2016; Strauss et al., 2005; Watson, Angell, Morabito, & Robinson, 2008). If the CIT training leaves officers in a position where their training is not fully able to help them in these situations, this can lead to a citizen with mental illness physically harming an officer and, in return, an officer may respond with deadly force. These situations can be addressed by follow-ups with officers after CIT trainings every year.

In conclusion, this literature review indicates that further research needs to be done on the effectiveness of CIT programs nationally. Deaths of mentally ill citizens continue today as the *Washington Post* continues to track this data (Kindy, 2016). After my review of the 10 studies included in this systematic literature review, I can suggest that CIT training does effectively reduce the number of deaths of mentally ill citizens at the hands of law enforcement. I also must state that CITs have room for improvement. CITs need changes, which have been included in the

recommendation section above. Previous research on this topic and in many of the studies I included in this review also suggest that CITs are not perfect but have grown since the first initiation in Memphis. For now, this public health issue can be further improved through researching this topic in the US. From that point, more intervention research should be developed to improve the effectiveness of CIT training. One day, CIT trainings can be perfected as they are now being tried in continents like Africa (Kohrt et al., 2015).

APPENDIX:

Annotated bibliography of the articles reviewed

Crisis Intervention Team Training for Police Officers Responding to Mental Disturbance Calls

Teller, J. L., Munetz, M. R., Gil, K. M., & Ritter, C. (2006). Crisis intervention team training for police officers responding to mental disturbance calls. *Psychiatric Services, 57*(2), 232-237. *PubMED.* doi:10.1176/appi.ps.57.2.232

Over the span of two years, this retrospective study looked at how officers responded to mentally ill citizens before and after CIT training. The study was conducted in Akron, Ohio, and had a large sample size of more than 10,000 subjects. By reviewing monthly average rates of mental health disturbance calls, including the rate of calls to police and the effects of the CIT techniques used in responses, author Jenner Teller showed that CIT programs allowed officers to help citizens going through a mental health crisis get the treatment needed.

Effects of a Crisis Intervention Team (CIT) Training Program upon Police Officers before and after Crisis Intervention Team Training

Ellis, H. A. (2014). Effects of a crisis intervention team (CIT) training program upon police officers before and after crisis intervention team training. *Archives of Psychiatric Nursing, 28*(1), 10-16. doi:10.1016/j.apnu.2013.10.003.

This was a quasi-experimental study that focused specifically on 25 police officers. The study was done pre- and post-CIT training in Miami Dade-County. In the study, researchers collected data on many topics, but mainly on CIT effectiveness. Three other focus points included the perception of the mentally ill population, knowledge of mental illness, and attitude

toward the mentally ill citizens in altercations. The author discovered statistical results showing that CIT programs delivered benefits to mentally ill citizens and law enforcement.

Use of Force Preferences and Perceived Effectiveness of Actions among Crisis Intervention Team (CIT) Police Officers and Non-CIT Officers in an Escalating Psychiatric Crisis Involving a Subject with Schizophrenia

Compton, M. T., Neubert, B. N., Broussard, B., McGriff, J. A., Morgan, R., & Oliva, J. R. (2009). Use of force preferences and perceived effectiveness of actions among crisis intervention team (CIT) police officers and non-CIT officers in an escalating psychiatric crisis involving a subject with schizophrenia. *Schizophrenia Bulletin, 37*(4), 737-745. doi:10.1093/schbul/sbp146

This quantitative study looked at 135 officers; 48 were CIT trained and 87 were non-CIT trained officers. The main mental illness in this study was schizophrenia. The authors wanted to verify whether CIT-trained officers responded differently to mentally ill citizens than non-trained CIT officers. The study wanted to observe how CIT training assisted in reducing the death of mentally ill citizens. The officers were observed regarding their choice of levels of force and nonphysical actions to deescalate crimes involving psychiatric criminals. In the end, CIT-trained officers were found to be more effective in reducing the deaths of mentally ill citizens.

The Police-Based Crisis Intervention Team (CIT) Model: II. Effects on Level of Force and Resolution, Referral, and Arrest

Compton, M. T. (2014). The Police-Based Crisis Intervention Team (CIT) Model: II. Effects on level of force and resolution, referral, and arrest. *American Psychiatric Publishing Journals*.

This study also looked at a total of 180 officers (91 with CIT training and 89 without). By the end of the study, the officers had encountered 1063 offenders. Taking place in Savannah and Atlanta, Georgia, the study looked at the level of force used and dispositions that included results of actions at the scenes, whether citizens were referred or transported to mental health teams or arrested and taken into custody. In the end, CIT-trained officers' referral or transport was most likely the outcome and arrest was less likely the outcome.

Segmented Versus Traditional Crisis Intervention Team Training

Cuddeback, G. S., Kurtz, R. A., Wilson, A. B., VanDeinse, T., & Burgin, S. E. (2016). Segmented versus traditional crisis intervention team training. *Journal of the American Academy of Psychiatry and the Law, 44*(3), 338-343. Retrieved from http://jaapl.org/content/44/3/338.long

In this quasi-experimental study, there was a total of 79 officers, with 47 receiving traditional CIT training and 32 receiving segmented CIT training. For background, most CIT trainings are a consecutive 40-hour week of training. In this study, the authors compared the officers' ability to reduce the death of mentally ill citizens with consecutive CIT training vs segmented training. Taking place in rural North Carolina, there was a small sample size used with 79 officers, and apart from three cases, there was no difference in the ability to complete the goal of CIT-trained officers in using less force when they are trained in segments or consecutively.

Intervening at the Entry Point: Differences in How CIT Trained and Non-CIT Trained Officers Describe Responding to Mental Health-Related Calls

Canada, K. E., Angell, B., & Watson, A. C. (2011). Intervening at the entry point: Differences in how CIT trained and non-CIT trained officers describe responding to mental health-related calls. *Community Mental Health Journal, 48*(6), 746-755. doi:10.1007/s10597-011-9430-9

In the city of Chicago, Illinois, this qualitative research study looked at how CIT training reflects police responses to mentally ill citizens. Researchers reviewed the response reports of 216 convenient-sampled CIT-trained police officers in the city. This data was also compared to data in reports from non-CIT trained officers. The study results showed there were common themes in three categories. The categories were assessment, response tactics, and disposition. For assessment, the CIT-trained officers noted a more "comprehensive assessment" than non-CIT trained officers. As far as response tactics, CIT-trained officers felt that communication was a good technique and one that is enhanced through CIT training. On the other hand, non-CIT trained officers could not recall any techniques, and they just did what they felt was best, even if it was the use of a tazer. As far as dispositions, CIT-trained officers showed a difference. In addition to sending people to jail or hospitals like non-CIT trained officers, CIT-trained officers also referred non-emergency citizens to community agencies, and there was more discussion about local programs and services they may benefit from.

Psychiatric Disposition of Patients Brought in by Crisis Intervention Team Police Officers

Strauss, G., Glenn, M., Reddi, P., Afaq, I., Podolskaya, A., Rybakova, T., . . . El-Mallakh, R. S. (2005). Psychiatric disposition of patients brought in by crisis intervention

team police officers. *Community Mental Health Journal, 41*(2), 223-228. doi:10.1007/s10597-005-2658-5

This study's main goal was to see investigate how to improve mental health care delivery to "acute distress patients" and improve police interactions with them. Over six months, this prospective evaluation descriptive study looked at how psychiatric patients' dispositions changed when the local police department was CIT trained. Taking place in Louisville, Kentucky, 485 randomly selected patient dispositions were evaluated. The study found that CIT-trained officers did a great job of referring more psychiatric patients to the hospital that needed care than non-CIT trained officers.

Descriptive Study of Older Adults Encountered by Crisis Intervention Team (CIT) Law Enforcement Officers

Tyuse, S. W., Cooper-Sadlo, S., & Underwood, S. E. (2016). Descriptive study of older adults encountered by crisis intervention team (CIT) law enforcement officers. *Journal of Women & Aging,* 1-13. *PubMED.* doi:10.1080/08952841.2016.1174513

This was a unique study. It was the only one that focused on the older population of mentally ill citizens. In this retrospective study, research was done to see how many times older adults encountered CIT officers and the results of these interactions. Taking place in St. Louis, Missouri, 352 patients were involved in this random selection. It was important to focus on this population because many of these older adults met CIT officers because of the scarce amount of mental health facilities available.

A Descriptive Evaluation of the Seattle Police Department's Crisis Response Team Officer/Mental Health Professional Partnership Pilot Program

Helfgott, J. B., Hickman, M. J., & Labossiere, A. P. (2016). A descriptive evaluation of the Seattle Police Department's crisis response team officer/mental health professional partnership pilot program. *International Journal of Law and Psychiatry, 44*, 109-122. doi:10.1016/j.ijlp.2015.08.038.

This was a large study that took place in the city of Seattle, Washington. This study ran from 2010-2012. It was unique because this was the first police department to pair CIT-trained officers with actual mental health professionals (MHPs), called a crisis response team (CRT). The goal was see how beneficial it was to add actual mental health teams to work alongside CIT-trained officers. The team wanted to see how this combination affected resolution time, repeat contacts, and referral to services. In all, 3029 cases came to the department for mental health patients. The CRT was assigned 669 of those cases. By having both an MHP and CIT Group, more citizens were dispositioned to better alternatives than jail than with CIT alone, showing the benefit of MHPs.

Defying Negative Expectations: Dimensions of Fair and Respectful Treatment by Police Officers as Perceived by People with Mental Illness

Watson, A. C., Angell, B., Morabito, M. S., & Robinson, N. (2008). Defying negative expectations: Dimensions of fair and respectful treatment by police officers as perceived by people with mental illness. *Administration and Policy in Mental Health and Mental Health Services Research, 35*(6), 449-457. *PubMed.* doi:10.1007/s10488-008-0188-5

This qualitative study was done by completing 20 key informant interviews of mentally ill citizens regarding their 67 encounters with police. Using a theory known as procedural justice

as the theoretical framework, the researchers could find common themes in the response of the mentally ill citizens. One was the fear and vulnerability they had around officers. The other was the concern they had about the way they were treated by officers. What the study found was that much of the encounters officers had with mentally ill citizens were initiated by the police (36/67). Only nine encounters were initiated by the participants. The remaining initiations were by someone outside of the police and participants. In addition, the study found that the participants felt that most interactions lead to police "jumping on them." The study suggests a need for more CIT officers to improve the interactions between mentally ill citizens and law enforcement.

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