

2019

# The Impact of Critical Incident Team Training on Arrest and Diversion Rates

Richard Wayne Foss  
*Walden University*

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# Walden University

College of Social and Behavioral Sciences

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Richard W. Foss

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## Review Committee

Dr. David Rentler, Committee Chairperson, Psychology Faculty  
Dr. Sandra Caramela-Miller, Committee Member, Psychology Faculty  
Dr. Jessica Hart, University Reviewer, Psychology Faculty

Chief Academic Officer  
Eric Riedel, Ph.D.

Walden University  
2019

Abstract

The Impact of Critical Incident Team Training on Arrest and Diversion Rates

by

Richard W. Foss

MS, University of Phoenix, 2007

BA, Western International University, 2004

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Forensic Psychology

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February 2019

## Abstract

The Critical Incident Team (CIT) training program equips police officers with knowledge regarding mental illness and practical skills for effectively interacting with a mentally ill suspect. In addition to improving officer and suspect safety by decreasing the number of violent encounters between police and the mentally ill, CIT goals include reducing the number of mentally ill individuals who are arrested and providing them with assistance through community resources. However, there is a lack of empirical research on whether CIT training decreases arrest rates and increases diversion rates for mentally ill subjects. The purpose of this quantitative study was to measure the effects of CIT training on arrest and diversion rates of mentally ill subjects. The theoretical foundation for the study was evidence-based policing. Reports from a single police department in the southwestern United States were reviewed, and arrest and diversion incidents from 6-months pre and post CIT training for 30 police officers were collected. A paired-samples *t* test was used to analyze the data, which indicated that there was not a statistical difference in arrest rates or diversion rates between pre and post CIT training. Results corroborated the findings of other studies showing that arrest and diversion rates are not affected by CIT programs. Law enforcement agencies that currently have or are looking to implement a CIT program may find the study useful, as it reports an increase in resources being provided to mentally ill subjects following contact with a CIT officer. Recommendations include additional research into the effectiveness of the CIT program as well as the continuation of collaboration between community mental health organizations and police, both of which may lead to positive social change.

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## Dedication

This work is dedicated to the men and women of law enforcement who put their hearts and lives on the line every day.

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## Chapter 1: Introduction to the Study

### **Introduction**

In this research, I examined the effect that Critical Incident Team (CIT) training completed by police officers has on both the arrest rates and diversion rates for individuals with a mental illness. The purpose of this study was to add to the existing body of research regarding the effectiveness of CIT programs (Canada, Angell, & Watson, 2012; Compton et al., 2014b) in reducing the number of mentally ill individuals entering the criminal justice system and to increase the utilization of community resources designed to assist these citizens. Most studies on the topic of CIT effectiveness have focused on the change in the knowledge, beliefs, and perception of mental illness and the mentally ill by police officers (Barcelos, 2014; Bonfine, Ritter, & Munetz, 2014; Canada, Angell, & Watson, 2012; Compton et al., 2014a; Compton et al., 2014b; Desmarais et al., 2014; Prince, 2013; Watson & Angell, 2013). In contrast, I sought to add to the knowledge base regarding the CIT program's ability to affect arrest and diversion rates. The positive social change implications of this study include providing more evidence of the effectiveness of CIT, as well as advocating for the need for additional research in this field.

This chapter contains background information on CIT programs and documented outcomes on officers, suspects, and the community. The chapter also includes a review of real-world applications of this study along with the purpose of this study and the research questions and hypotheses. An overview of the study's theoretical framework and key variables and data collection and analysis procedures; definitions of key terms; and the

assumptions, scope and delimitations, and limitations of the study follow. The chapter concludes with a summary of key points.

### **Background**

In 1987, officers with the Memphis, Tennessee, police department responded to a call where they encountered a 27-year-old man with a knife. The suspect, who was later found to have been mentally ill, was shot and killed by police (NAMI, 2015). In response to this incident, the Memphis police and the National Alliance on Mental Illness (NAMI) worked together to develop the CIT program (Sharp, 2013; Usher, 2013). Commonly referred to as the Memphis Model, the CIT program was designed to both provide practical training regarding multiple aspects of mental illness to patrol officers, as well as to educate them about the resources within their jurisdiction that could be utilized to mitigate negative outcomes and provide help for suspects dealing with a mental illness (Morabito, Watson, & Draine, 2013; Usher, 2013; Watson & Fulambarker, 2012).

The use of force on a suspect by police occurs in less than 1% of all police contact, with most of these encounters involving the use of physical force rather than weapons, and injuries sustained by suspects and officers typically being scrapes and bruises (Morabito, Kerr, Watson, Draine, & Angell 2012). Although the use of force by police officers is relatively rare when compared to all contact that police have with citizens, it is the use of force that receives the most attention due to the potential for injuries or death (Morabito et al., 2012). The use of force also receives extensive media coverage. This attention has reinforced interventions like CIT to avoid the rare cases of death or serious injury (Morabito et al., 2012).

The CIT training provided police officers a closer look at the issues of mental health and those individuals that they encounter during their job duties that experience challenges in this area. Researchers studying how CIT- and non-CIT-trained officers interact with mentally ill suspects have uncovered many differences between the two officer groups. Officers without the benefit of CIT training were more likely to rely on the skills they learned in their academy training when dealing with a mentally ill suspect, which primarily included verbal commands or gaining physical control of the suspect (Canada et al., 2012). In contrast, CIT-trained officers displayed the use of active listening skills to not only discover the needs that a suspect may have, but also to ease the emotions in a situation that may have otherwise become aggressive (Canada et al., 2012).

Research in CIT has also revealed that the most significant factor in determining whether a police officer uses physical force with a mentally ill suspect is the demeanor of the suspect (Compton et al., 2014a; Morabito et al., 2012). In one study, those officers who were CIT-trained found alternative ways to obtain compliance from a mentally ill suspect who was being verbally resistant other than the use of physical force when compared to non-CIT-trained officers (Compton et al., 2014a; Morabito et al., 2012). In addition, CIT trained officers noted that verbal resistance was a possible sign of mental illness and thus were more likely to utilize their training on de-escalation (Morabito et al., 2012). When the suspect displayed physical resistance to compliance with police, there was no significant difference between CIT- and non-CIT-trained officers (Morabito et al., 2012). The results of these studies show that CIT-trained officers are well equipped to reduce the interactions with mentally ill subjects that result in the use of physical force.



While there is a common misconception that individuals with a mental illness tend to be violent or dangerous to the public, most individuals with a mental illness are more likely to be a victim of violence rather than a perpetrator of violence (Varshney, Mahapatra, Krishnan, Gupta, & Deb, 2016). Statistically, those individuals with a major mental illness do present a higher rate of crime, both violent and non violent, than the rest of the population (Ogloff et al., 2013). Aggression on the part of both police and mentally ill suspects shapes the perceptions that both groups have of one another (Desmarais et al., 2014). Researchers have examined these perceptions in relation to CIT training, finding that CIT-trained officers were more likely to treat mentally ill suspects with respect and understanding, therefore reducing the incidents of aggression from both the officers and the suspects (Desmarais et al, 2014; Watson & Angell, 2013).

Desmarais et al. (2014) found that most individuals with a mental illness who have had contact with police and been interviewed about their experiences were unhappy with how they were treated not only by the police, but by the mental health workers whom they interacted with because of their police contact. Desmarais et al. (2014) found that those with a mental illness expected to be treated poorly by the police, which led to fear and distrust prior to ever having police contact. However, following police contact, the mentally ill suspects stated they were treated appropriately by police (Desmarais et al., 2014). Additional research showed that most mentally ill suspects reported positive encounters with the police despite what their expectations may have been (Desmarais et al., 2014). In another study, mentally ill suspects who believed they had been treated with fairness by the police were more likely to be cooperative, yet the individual's level of

perceived stigma affected his or her level of cooperation (Watson & Angell, 2013). This supports the idea that positive treatment of mentally ill suspects by police can assist in changing negative perceptions of police and reducing the fear and distrust present.

Researchers have also examined the attitudes and perceptions that police have towards the mentally ill. Studies have shown that mentally ill suspects will react to police based on how the officer interacts with them, and vice versa, with officers being more likely to handle a situation based on the attitude of the subject rather than any information they have regarding any mental illness (Canada et al., 2012). CIT-trained officers are generally able to conduct more effective assessment of the subject and their behaviors when compared to non-CIT-trained officers (Canada et al., 2012). The ability to effectively assess an individual comes from using active listening skills, as well as asking direct questions regarding a suspect's mental state (Canada et al., 2012). This ability to assess and determine that a behavior is possibly due to a mental illness has helped those officers trained in CIT to resolve an issue without the use of force, thus improving officer and suspect safety (Canada et al., 2012). The importance of the knowledge and skills provided to officers through CIT training has been highlighted in the current literature.

Scholars who have conducted research on CIT programs have reported that those officers completing the 40-hour training have a greater knowledge of issues surrounding mental illness, improved attitudes towards those with a mental illness, and an increase in confidence and readiness to interact with mentally ill suspects (Bonfine, Ritter, & Munetz, 2014; Compton et al., 2014a). Police officers who completed CIT training reported both an increase in their ability to deal with a situation involving a mentally ill

suspect, and a decrease in the social distance stigma (Compton et al., 2014a). The increased knowledge and confidence regarding interactions with mentally ill suspects help CIT-trained officers to be better equipped in such situations than their non-CIT-trained counterparts.

Studies on the interactions between mentally ill individuals and the U.S. justice system have indicated that individuals with a serious mental illness are at a higher risk of engaging in illegal activity, and that between 15 to 31% of incarcerated individuals have a serious mental illness (Compton et al., 2014b; McCabe et al., 2012). When comparing CIT- and non-CIT-trained police officers, those officers who successfully completed the 40-hour CIT training were more likely than other officers to find alternatives to making an arrest when dealing with mentally ill suspects (Canada et al., 2012). Non-CIT-trained officers reported a weaker understanding of mental illness in general, as well as a lack of knowledge about the resources within their community that can assist the mentally ill (Compton et al., 2014b). CIT training provides police officers with tools that can be used to provide alternative disposition for calls regarding mentally ill suspects, thus increasing the possibility of reducing the number of mentally ill suspects introduced in the U.S. justice system.

The focus of previous studies on CIT has been on the various challenges that these programs can present, such as issues with implementing and sustaining the program, as well as maintaining proper mental health programs in the community to work with officers (Skubby, Bonfine, Novisky, Munetz, & Ritter, 2013). Other researchers have examined the number of arrests made by police departments that have utilized CIT

training, and scrutinized how many unnecessary arrests were prevented because of CIT being utilized (Franz & Borum, 2011). One gap identified in the research regarding CIT is how the training program affects the use of arrests and diversions on a single group of officers within the same police department.

### **Problem Statement**

Every day in the United States, police officers are called upon to respond to a variety of situations and interact with a wide array of citizens within their jurisdiction. In most cities across the country, approximately one in every 10 calls for service places a police officer in direct contact with a mentally ill individual (Canada et al., 2012). This contact could include the mentally ill individual being the victim of some type of criminal activity, being the suspected perpetrator of some type of criminal activity or being involved in a crisis due to the suspect's current psychological symptoms. A review by the University of Wisconsin-Madison of deadly police shootings showed that a quarter of all fatal police shootings between 2015 and 2016 involved a mentally ill suspect (Frankham, 2018). The deaths of mentally ill subjects is what prompted the development of CIT programs to better equip police officers when dealing with an individual with some form of psychological impairment (Harvey, 2014).

The CIT program was developed as a highly structured training program to provide police officers with knowledge about mental illness and the surrounding issues related to individuals negotiating a mental illness. The CIT program is designed to not only provide information to officers about mental illness, but to also provide the officers with skills on how to interact with mentally ill suspects efficiently, including de-

escalation skills for potentially volatile encounters (Canada et al., 2012; Watson & Fulambarker, 2012). Officers are also connected with agencies within their community that have agreed to partner with law enforcement in their efforts to assist individuals that the officers encounter with a mental illness (Watson & Fulambarker, 2012). The 40-hour training provides specialized instruction for police officers. The training is carried out by mental health professionals, including those working within the community who will be available to officers while in the field (Watson & Fulambarker, 2012). The training program also includes presentations by individuals with a mental illness as well as their family members, which provide feedback on their experiences interacting with the police. Instruction includes topics such as mental health disorders, substance abuse, local resources, legal issues, and de-escalation techniques (Canada et al., 2012; Watson & Fulambarker, 2012). The training concludes with officers walking through several scenarios where they have a chance to practice the skills learned throughout the training before returning to their regular work shifts (Canada et al., 2012).

The CIT program has several outcome goals, including strengthening the relationship between police and the mentally ill, increasing officer and public safety, providing mental health assistance to those in need, and reducing the arrest rates of mentally ill suspects (Blevins, Lord, & Bjerregaard, 2014). Research has shown that CIT-trained officers are able to use listening skills learned in their training as a tool to de-escalate a situation, figure out the immediate needs of the suspect, and provide enough time to evaluate the situation and determine the most appropriate solution (Canada et al., 2012). CIT training has also been shown to change the attitudes and perceptions that

officers have regarding the mentally ill, and, even in communities with very limited resources, been found to provide positive resolution to calls for service that did not include arrests or use of force (Canada et al, 2012; Compton et al., 2014a). In this study, I examined the specific CIT goals of reducing the number of arrests involving the mentally ill and increasing the number of diversions offered to these individuals, thus aiding rather than introducing them to the justice system.

### **Purpose of the Study**

The purpose of this quantitative, quasi experimental design was to measure the effects of CIT training on the arrest rates and diversion rates among mentally ill suspects who encounter police during calls for service in a suburban city in the southwestern United States. I compared the arrest and diversion rates by police officers for a 6-month period prior to completing CIT training to the arrest and diversion rates for a 6-month period following CIT training. The dependent variable for this study was the disposition of the call for service, specifically whether an arrest was made, or the mentally ill suspect was diverted to assistance through community resources. The independent variable was the CIT training completed by police officers.

### **Research Questions and Hypotheses**

The study's research questions and hypotheses were, as follows:

Research Question 1: Is there a significant change in the rate of arrests of subjects with a mental illness made by CIT-trained officers pre-and post CIT training?

$H_0$ 1: There is not a significant change in the rate of arrests for subjects with a mental illness made by CIT-trained officers pre-and post CIT training.

*H*<sub>1</sub>1: There is a significant change in the rate of arrests for subjects with a mental illness made by CIT-trained officers pre-and post CIT training.

Research Question 2: Is there a significant change in the rate of diversion of subjects with a mental illness made by CIT-trained officers pre-and post CIT training?

*H*<sub>0</sub>2: There is not a significant change in the rate of diversions for subjects with a mental illness made by CIT-trained officers pre-and post CIT training.

*H*<sub>1</sub>2: There is a significant change in the rate of diversions for subjects with a mental illness made by CIT-trained officers pre-and post CIT training.

### **Theoretical Foundations for the Study**

The theoretical framework used for this study was evidence-based policing (EBP). Evidence-based practice is a theory used by multiple disciplines, including nursing, medicine, management, and law enforcement (Lum, Koper, & Telep, 2011). Groups that employ this theory utilize scientific evidence to guide the decisions made in their professional environment (Lum et al., 2011). EBP specifically addresses how leaders in law enforcement develop and implement policies and programs that have been found to be effective through empirical evidence (Avdija, 2008). For agencies with limited resources, using EBP is a way to ensure that police efforts are focused in areas of law enforcement and crime prevention that have successfully used by other departments (Mazerolle & Martin, 2012). EBP, as well as its connection to targeted policing and labeling theory, is examined further in Chapter 2.

### **Nature of the Study**

The nature of this study is quantitative, which was found to be most appropriate approach as the goal was to compare data from one group, both pre and post CIT-training (Creswell, 2014). A paired samples t-test was chosen for this study to detect any statistically significant differences between the arrest rates and diversion rates for police officers before and after completed CIT training. The arrest records of police officers that have completed the 40-hour CIT training were reviewed to identify changes in the arrests and diversions before and after the training. Archival data was utilized for this study and was collected from the police reports completed by these officers. The independent variable for this study is the 40-hour CIT training completed by police officers employed by a single police department in a southwestern city in the United States. The dependent variable for this study is the outcome to the calls for service, specifically the arrest rates and diversion rates of the mentally ill suspects that the police officers encounter through a call for service.

### **Definitions**

*Arrest:* detaining an individual by a police officer relating to a crime where individual is not free to leave (Findlaw.com, 2017).

*Call Disposition:* The official outcome of a call for service by police officers.

*Call for Service:* A request by police dispatch made to police officers to respond to a specific location.



*Diversion*: when a police officer has cause to make arrest of an individual but choose to help the individual, such as bringing them to a hospital, rehabilitation center, or mental health facility, rather than put them into the justice system.

*Mental Health Services*: services including marriage and family therapy, counseling, social work, substance abuse counseling, or the education of an individual regarding mental health issues.

*Memphis Model*: “an innovative police-based first responder program that has become nationally known as the "Memphis Model" of pre-arrest jail diversion for those in a mental illness crisis (CIT Center, n.d.).

*Psychological Crisis*: an individual in psychological crisis is threatening to harm themselves or others or is out of touch with reality due to a substance abuse issue or a mental health condition (American University, 2017).

*Suspect*: a person that has been apprehended, usually by law enforcement, but that has not yet been charged with a crime (Findlaw.com, 2017).

*Symptomology*: “the symptoms of a complex disease,” particularly pertaining to mental illness (Merriam-Webster, 2017).

*Use of Force*: the amount of effort used by police officers to gain compliance of an uncooperative suspect (National Institute of Justice, 2016).

### **Assumptions**

The disposition of the calls for service involving the CIT-trained officers were gathered from archived police reports. It was assumed that these police reports depict the true outcome of the call for service. It was also assumed that the police officers have

documented the behaviors and communications from the individuals that they encounter as accurately as possible within their report. These assumptions are necessary in order to verify the details of the interactions between police officers and the mentally ill suspects that they encounter.

### **Scope and Delimitations**

The scope of this research is to determine if CIT training reduces the number of arrests and increase the use of diversions for mentally ill suspects by police officers. Archival data in the form of police reports taken from CIT-trained police officers were reviewed for this study, specifically the 6-months prior to CIT training and 6-months following CIT training. All police officers that have completed CIT training were included in this study, however the data collected from CIT-trained officers was limited to those officers that worked in the capacity of a patrol officer for the 12-month collection period, excluding any officer in a supervisory capacity, such as sergeants, lieutenants, and commanders. For the purposes of this study, mental illness was defined as a state of mind where a person's cognitive functions, mood, or thought process impacts their ability to effectively care for oneself or relate to other people (NAMI, n.d.), and a mentally ill individual was defined as those individuals that are exhibiting symptoms of mental illness during their interaction with the police, as well as those individuals that have recently experienced symptoms of mental illness that have caused them to require professional assistance.

Results of this study can be used by other police departments that support and incorporate CIT training for officers to see how the utilization of this training impacts

their department. A failure to reject the hypothesis that police officers that have completed CIT training make fewer arrests of mentally ill suspects, then the impact of these results can be extrapolated to other areas within the department and the community. Fewer arrests by officers would allow the CIT officer to be active in their beat for more hours of their shift, which then could potentially affect crime reduction, job satisfaction, and fewer incidents of repeated interactions with the same mentally ill individuals due to the officers' utilization of community mental health resources.

### **Limitations**

Limitations for this study included the use of archival data and maturation, which can be a threat to internal validity in quasi-experimental studies (Creswell, 2014). By choosing to use archival data for this study, I encountered two immediate limitations by having no control over either the completeness or the quality of the reports completed by police officers (Schultz, Hoffman, Reiter-Palmon, 2005). If portions of the events described within a police report are omitted for any reason, this may have caused potentially vital information to go unreported and thus interfered with attempts to accurately collect data from the report. Likewise, a police report with insufficient details regarding a subject's demeanor and behavior, including anything said by the individual may also have resulted in this researcher's ability to make a proper assessment of the whether the data should have been included or removed from the study.

Another limitation to using the archived police reports was the possible absence of knowledge and understanding about mental illness that police officers had prior to completing CIT training. The reports taken 6-months prior to training may have been

lacking enough detailed information to identify the call for service as involving a mentally ill suspect, and thus may have led to the misinterpretation of the information collected within the police report (Stewart, 2012). Police officers with limited familiarity with the signs of mental illness may have disregarded a subject that displayed feelings of sadness and depression, anxiousness, fear, or even anger and hostility. Indirect signs of substance abuse, such as severe mood swings during police interaction or the inability to follow given commands, may have been credited to being intoxicated rather than the presence of a mental illness. Even the obvious signs of substance abuse, such as possession of drugs or drug paraphernalia, physical signs of impairment, or self-admission to use of drugs or alcohol can themselves be a sign of self-medicating due to a mental illness.

With regards to maturation, the difference in experiences and years of service following CIT may have some effect on the outcomes to calls for service. Job stress for police officers, which has shown to be part of the job itself due to the demands and exposure to dangerous environments, is shown to influence the officers' job performance (Chen, 2009). With a longer tenure in law enforcement, the greater the likelihood that police officers will be subjected to additional stressors. The issue of maturation may have been a factor in study if the data collection period was longer, as there would have been an increased chance that stressors had affected an officer's ability or desire to follow protocol, such as their CIT training. By keeping the data collection for this study to a short period of 6-months pre-and post CIT training, maturation was limited.

Potential biases for this study included a police officer's negative attitude regarding their interactions with mentally ill individuals coupled with the fact that they may have been placed into the CIT training program involuntarily. While the initial vision of the CIT program is for officers to choose to participate in the training, as well as having approximately 25 percent of an agencies' officers CIT-trained, some law enforcement agencies have felt that all officers should be CIT-trained. While the CIT training itself has been shown to improve police attitudes towards mental illness (Canada et al., 2012; Prince, 2013), having too many CIT-trained officers can result in an officer not utilizing their training as often and therefore may not see the CIT program as necessary (Morabito et al., 2013; Watson & Fulambarker, 2012). While there is no evidence that officers that voluntarily go through CIT training respond better to mentally ill suspects than those that did not go through the training voluntarily, having only a portion of a police force CIT-trained is important. The police agency used for this study had approximately 26 percent of their officers CIT-trained at the time of data collection.

### **Significance**

The findings from this study have added to the current knowledge of how CIT training effects the outcome of a call for service where a police officer encountered a mentally ill suspect (Canada, Angell, & Watson, 2012; Compton et al., 2014a; Compton et al., 2014b; McCabe, Christopher, Druhn, Roy-Bujnowski, Grudzinskas, & Fisher, 2012). The study looked to fill the gap of knowledge regarding whether CIT training lowers the level of arrest rates and increases the use of diversion for mentally ill suspects. The proposed study focused on the CIT-trained officers of a single police department in

the southwestern United States. With the high number of mentally ill individuals that encounter the police, as well as the number of incarcerated mentally ill subjects (Canada, Angell, & Watson, 2012; Compton et al., 2014b), results of this study can be used to either verify the effectiveness of CIT training in reducing the number of mentally ill subjects that are arrested, or as a catalyst to review the training process for these police officers.

The issue of positive social change in relation to this study includes affirmation of the extent to which preparing law enforcement officers can provide assistance for the mentally ill and keep them out of the justice system. By better understanding how the CIT training has affected both the arrest and diversion rates, the police department used for this study can review their current procedures in relation to the implementation of the program, while other police departments that utilize the same CIT training school can review portions of the training to make adjustments if necessary. The results of this study add to the existing knowledge base of the effectiveness of CIT on arrest and diversion rates and whether the program can be considered EBP.

### **Summary**

Chapter 1 has provided a more detailed overview of the CIT program, as well as specific details related to this study. The review of current literature surrounding the effects that CIT have been summarized, and the purpose of the study was clearly stated, including how this study adds to the knowledge base. Theoretical frameworks used for this study were also stated in this chapter. Definitions of terms specific to this study, including many terms utilized by law enforcement officers, were listed within this

chapter. Finally, the scope of this study, as well as the limitations of the study, were clearly stated.

Chapter 2 provides a more detailed look at the knowledge base for the effects of CIT training, focusing on use of force issues, attitudes held by both the mentally ill towards police and the officers' attitudes towards the mentally ill, and the disposition of calls for service.

## Chapter 2: Literature Review

### **Introduction**

Throughout the course of their daily responsibilities, police officers respond to a variety of calls for service and interact with a diverse segment of the population, work which includes regular contact with mentally ill citizens. It is estimated that 10% of calls for service in a moderate to large U.S. city will involve an individual with a mental illness (Canada et al., 2012). The degree of the individual's mental illness can vary, as well whether the individual is a victim, suspect, or currently in crisis (Livingston et al., 2014). A review of the use of deadly force by police officers showed that almost half of all fatal police shootings involved a mentally ill suspect, prompting the development of CIT programs to better equip police officers when dealing with an individual with some form of psychological impairment (Harvey, 2014). While studies have shown that the successful implementation of CIT programs has increased police officer understanding of mental illness and resulted in safer outcomes in calls for service, there have been few studies regarding the impact of overall arrest rates and diversions for those communities that have CIT-trained officers (Watson & Fulambarker, 2012). The purpose of this study was to determine if arrest and diversion rates change following CIT-training. This study was conducted in a suburban city in the southwestern United States.

In this chapter, I review the literature available on CIT programs that have been implemented across the United States. This review begins with an overview of the history of CIT and is followed by a section on CIT's effect on police officers' use of force when responding to calls for service involving individuals with a mental illness. The next



section includes a review of the effects that CIT training has on officers' knowledge, beliefs, and attitudes towards the mentally ill. This review includes discussion confidence and skill of officers involved in this area. In the next section of the review, I consider the effect that CIT training has on the disposition of calls for service involving the mentally ill. The focus of the final section of the review is on the effectiveness and limitations of CIT programs. Chapter 2 begins with overviews of my literature search strategy and theoretical foundation.

### **Literature Search Strategy**

While completing this literature review, I conducted a search of online databases, including those accessible from the Walden University Library. The EBSCO databases accessed through Walden University for this review included PsychINFO, PsychARTICLES, SAGE Premier, and ProQuest Criminal Justice. Additional online research of peer-reviewed and scholarly articles included ResearchGate and Google Scholar. I used the following key search words and terms: *CIT*, *CIT programs*, *CIT training*, *critical incident team*, *critical incident team training*, *police and mentally ill*, and *evidence-based policing*. The literature review in this chapter contains previous research regarding the history of the CIT program, policing, and mental illness, dissertations on CIT, as well as a review of articles published since 2012.

### **Theoretical Foundation**

#### **Evidence-Based Policing**

Evidence-based practice is an approach that is often used by leaders of various industries to assist in making decisions. EBP is an offshoot that is used to specifically

guide law enforcement entities in decisions to execute, maintain, or discontinue various policies and procedures (Avdija, 2008). A key element of EBP is the use of quality research, which is defined by Mazerolle and Martin (2012) as conducting randomized control trials throughout the field of policing to help identify what systems or programs work best at reducing certain type of crimes or calls for service. Leaders using EBP would then evaluate the results of particular programs, such as specialized patrol units, community-based programs, or CIT programs and compare them with an experimental control, which would be the typical police protocol (Mazerolle & Martin, 2012). The Lum-Koper-Telep EBP matrix is a well-used source of information regarding research of police programs; law enforcement agencies can review results and see the tested effectiveness of various programs (Mazerolle & Martin, 2012). This EBP matrix has shown hot spots policing and focused patrols to be effective tools for law enforcement (Mazerolle & Martin, 2012). By conducting research on various CIT programs throughout the country, law enforcement officials can, thus, determine if the use of various diversions or changes in the arrest rate is worth the cost that goes into sending officers to a 40-hour training .

Another area of policing that has gained momentum due to EBP is the study of suspect compliance in relation to how police officers treat citizens. Mazerolle and Martin (2012) have noted that when officers regard suspects fairly and with respect (i.e., in a way that encompasses procedural justice), suspects are more likely to be compliant during police contact and report a greater level of satisfaction with the conduct of police officers. EBP showing the importance of how police officers interact with citizens lends

credence to core principles of CIT in that training officers how to respond more effectively to individuals experiencing symptoms related to a mental illness will create a greater level of trust and cooperation (Desmarais et al., 2014; Watson & Angell, 2013). Implementing programs and policies that are EBP help law enforcement agencies to ensure that their resources are used effectively, and thus are beneficial to the community that they serve.

### **Targeted Policing**

Targeted policing is a form of EBP that came about because of limited police resources in a time when law enforcement officials were trying to maintain control over crime rates. Targeted policing calls for police departments to focus on a specific crime-rich area, population, offense, or time to help guide policies (Avdija, 2008; Horn, 2016). By focusing on these specifics, police can then identify the causes behind the crimes, and then subsequently become part of the solution to those problems (Avdija, 2008). Several police departments in Delaware initiated targeted policing, collecting data on times and places where crimes effecting quality of life for citizens were being committed. As a result, crimes such as homicides, shootings, and robberies recorded a double-digit decrease in these areas (Horn, 2016). Like CIT programs, this would include collaboration between police officers and local social services within the community.

CIT programs can be considered a part of the EBP field of law enforcement as a form of targeted policing with police officers focusing on a single population rather than a particular area or crime. While targeted policing is used to assess a population in relation to crimes committed, CIT programs center on targeting those calls for service

that involve a mentally ill suspect, regardless of whether a crime has been committed (Blevins et al., 2014). CIT and targeted policing share the goal of trying to identify causes, yet instead of necessarily looking for the cause of the crime, the CIT program is looking for the cause of the individual's current stressor, such as safe shelter, medication, or possible hospitalization (Avdija, 2008; Blevins et al., 2014; Canada et al., 2012). While CIT and targeted policing are utilized to identify different issues within a particular population in the community, they both are utilized by police to provide useful services.

### **Labeling Theory**

Labeling theory, the idea that placing a label on an individual, such as “deviant” or “criminal,” will cause that individual to act out accordingly, was one of the most prevalent theories through which to study deviant behavior and crime from the late 1960s to the early 1980s (Paternoster & Bachman, 2013). Deviant behavior is the breaking of a rule that society has established (Becker, n.d.). According to the theory, an individual does not create deviant behavior; rather “social groups create deviance by making the rules whose infraction constitutes deviance, and by applying those rules to people and labeling them as outsiders” (Becker, n.d., p. 92). Being branded as a criminal changes an individual's overall identity because the individual is labeled a “wife beater,” “pervert,” or “crazy.” Becker (n.d.) stated individuals who are labeled in this manner may be viewed by others as having the potential to commit a deviant act again. For instance, police officers will make notes on police reports, such as “drug user” to not only warn officers who may interact with this individual in the future, but to alert officers looking

for a suspect that this individual has a documented history of deviant behavior (Becker, n.d.).

This change in an individual's identity that Becker (n.d.) discussed can cause a change in that individual's behavior, causing additional deviant behavior. This is called stigmatization, and the labeling theory believes that not only are individuals aware of their stigma, they attempt to develop certain strategies to deal with the stigma (Ray & Dollar, 2014). While some individuals who embrace positive strategies, such as becoming involved in treatment or education, others choose to seclude themselves from others, only weakening their social contact and self-esteem (Ray & Dollar, 2014). When individuals are offered and accept help for their problems, and they are treated with respect and fairness, empirical studies have shown that they will respond positively with fewer incidents of deviant behavior. This is known as procedural justice, a previously mentioned theory associated with EBP (Mazerolle & Martin, 2012; Ray & Dollar, 2014).

The implementation of the CIT model attempts to change the way that police officers view those individuals with a mental illness. While many of these individuals may already feel the negative impacts of having a label associated with mental illness, many of them have also had the criminal label attached as well. Empirical evidence has shown us time and again that police officers that undergo the standard 40-hour CIT-training come away with a better understanding and ability to recognize mental illness, as well as new skills in how to interact with and establish rapport with these individuals (Canada, Angell, & Watson, 2012; Compton et al., 2014a; Desmarais et al, 2014; Ogloff et al., 2013; Watson & Angell, 2013). By training officers through CIT programs, police

officers have an ability to offer help and assistance to individuals, thus given the tools to combat stigmatization. If the CIT program can meet its own goal of reducing the number of arrests made, it can also then reduce the number of people being labeled as criminals.

### **Literature Review Related to Key Variables and/or Constructs**

#### **History and Overview of CIT**

Police officers are tasked with finding safe and effective solutions for situations to which they are called to attend. When a call for service involves an individual with a mental illness, the officers have conventionally been given the option of arresting the individual or attempting to connect them with resources within their community. Unfortunately, many arrests were made when diversion to mental health treatment would have been the best outcome for the suspect (Blevins et al., 2014). Making an arrest of a mentally ill suspect in need of treatment was the beginning of a larger issue for the individual, the community, and the criminal justice system. If the charges against the mentally ill individual are dropped, the individual is back in the community without having received any assistance and may be likely to re-encounter the police in the future. If the charges stand, the individual runs the risk of not receiving the appropriate level of care with the sentence given by the judge (Blevins et al., 2014). The highly publicized incidents where use of force was used by police against an individual with a mental illness sparked the creation of a new response by law enforcement.

The CIT program was developed in response to concern surrounding the treatment of mentally ill individuals by police, which in some cases resulted in use of force that resulted in the death of a mentally ill suspect. The now widely incorporated

Memphis Model of CIT was created by the Memphis Tennessee Police Department in partnership with the National Alliance on Mental Illness (NAMI) following the death of a mentally ill suspect who was shot by police in 1987 (Sharp, 2013; Usher, 2013). The CIT program was unique in that it was not simply a training program for police officers, but a collaborative effort between law enforcement, families of those with mental illness, and the mental health treatment providers within the community (Morabito et al., 2013; Usher, 2013; Watson & Fulambarker, 2012).

The Memphis CIT model is structured to provide 40-hours of specialized training for police officers that volunteer. The CIT training is conducted by a combination of mental health professionals, mentally ill individuals and their family, and police trainers, and instruction regarding mental health disorders, substance abuse, possible visits to local treatment facilities, legal issues, and de-escalation are included (Canada, Angell, & Watson, 2012; Watson & Fulambarker, 2012). Officers are also connected with a centralized emergency drop-off location that they can utilize while on calls, as well as several other resources available within their community (Watson & Fulambarker, 2012). It is estimated that there are over 2,700 CIT programs currently implemented in the United States (Compton et al., 2014a).

### **Effectiveness of CIT: Use of Force**

Police officers have reported that the mentally ill suspects that they encounter in the field do not react to regular police procedures, such as giving verbal commands, and can result in a longer call for service for the officer, thus increasing the possibility of injury for both the suspect and the police officer (Canada, Angell, & Watson, 2012;

Watson & Angell, 2013). While most individuals with a mental illness do not pose a criminal threat to society, those with a major mental illness to represent a higher rate of violent and non-violent crimes when compared to the general population (Ogloff et al., 2013). Aggression between police and the mentally ill is primarily due to officers' lack of understanding of mental illness, as well as false belief that individuals with a mental illness are violent and uncontrollable (Canada, Angell, & Watson, 2012). Police officers who undergo the CIT training are taught diverse techniques for engaging with individuals with a mental illness, including those individuals that may be experience a psychological crisis. The CIT training consists of the officers participating in various scenarios in which they role-play interactions with actors that are portraying various mental illnesses (Canada, Angell, & Watson, 2012). The officers are monitored by CIT-trained personnel as well as mental health professionals during their role-plays and given feedback on what they did well and what things should be changed or eliminated.

When looking at the outcome of CIT training regarding police officer's use of force, we see that non-CIT officers have different responses when dealing with the mentally ill population. A qualitative study by Canada, Angell, and Watson (2012) looked at differences in how CIT and non-CIT officers interact with mentally ill suspects and the outcomes of those interactions. Those officers that did not go through the CIT program had difficulty distinguishing specific techniques that are utilized during mental health calls, other than giving verbal commands to the suspect or engaging the individual physically to gain control, both of which they learned in the academy (Canada, Angell, & Watson, 2012). One non-CIT trained officer reported that the skills and techniques



learned in the CIT program would be learned throughout the course of their careers on the street. The officer stated that when dealing with a mentally ill suspect, you simply “go along with the program, humor them, agree with them” (Canada, Angell, & Watson, 2012). This same officer went on to explain to the researchers that the best way to gain control over a situation involving a mentally ill suspect is to utilize handcuffs, leg shackles, and Tasers, as this makes the situation uncomfortable for the individual, thus promoting compliance (Canada et al., 2012).

Canada et al. (2012) also reported the CIT-trained officers could identify several specific tactics used when they encounter a mentally ill suspect. These included using active listening skills when talking with suspects, both to de-escalate the situation and learn what specific and immediate needs the individual might have and allowing sufficient time to find a resolution rather than resorting to physical tactics to force closure to the call for service. Canada et al. (2012) cite that these findings are in line with previous research that shows that individuals with a mental illness typically do not respond well to verbal commands or use of physical force that are utilized by law enforcement officers. The results of the study show that officers that complete CIT training are being provided with specialized tools that separate them from non-CIT officers, including avoiding the use of force by employing various de-escalation techniques (Canada, Angell, & Watson, 2012).

A study by Morabito, Kerr, Watson, Draine, and Angell (2012) acknowledged the fact that the use of coercion and force are utilized by police officers during their duties, yet they wanted to add to the limited research in these tactics being used with individuals

with a mental illness. While previous studies have indicated that people with a mental illness are not usually a danger to anyone, their behaviors may appear unusual and abnormal to police officers. Unfortunately, however, most police officers may approach an encounter with a mentally ill suspect using the same techniques that they would with any other suspect. If an officer does not receive compliance from using verbal commands, the situation may become strained, and the officer may have to resort to physical force to gain compliance (Morabito et al., 2012). The use of force by police officers is a relatively rare event, occurring in less than 1% of calls for service, with most of these encounters utilizing physical force rather than the use of weapons, and injuries sustained by suspect and officer typically being scrapes and bruises (Morabito et al., 2012). However, although the use of force by police is relatively a rare occurrence, it is a subject that receives heightened attention from the media, thus promoting interventions like CIT to avoid the rare cases of death or serious injury (Morabito et al., 2012).

The study by Morabito and colleagues (2012) solicited the involvement of select districts within the Chicago police department, with 80 police officers chosen from each district, both CIT and non-CIT trained, with at least 18 months of experience on the job. The study found that both CIT training and the demeanor of the mentally ill suspect were the greatest factors in determining use of force by police. CIT trained officers were less likely to utilize force when dealing with a suspect displaying a resistant demeanor than non-CIT trained officers, while there was no significant difference between the two groups when the suspect was resisting physically (Morabito et al., 2012). Furthermore, CIT officers may begin to see resistant behavior as a sign that they are dealing with a

suspect with a mental illness and thus begin de-escalation techniques (Morabito et al., 2012).

Compton and colleagues (2014b) performed a study of six law enforcement agencies in Georgia with a high percentage of CIT trained officers. A total of 1,063 encounters between police and the mentally ill were examined, finding that officers had to resort to physical force in 12% of those situations. Just like the Morabito study in Chicago, the results from Georgia indicate that there was no difference in use of physical force between CIT and non-CIT officers (Compton et al., 2014b). The study also identified that CIT officers were more likely to utilize de-escalation tools learned in their 40-hour training with suspects that were verbally resistant to the officer's initial commands, which again echoes the findings from Morabito et al. (Compton et al., 2014b).

In another study, Compton et al. (2015) completed two large surveys: one for police chiefs and sheriffs who had not implemented CIT programs in their department to determine the type of barriers these law enforcement agencies faced, and one for CIT and non-CIT-trained officers to study job satisfaction and officer responses to a vignette involving a psychotic individual. Police chiefs and sheriffs reported not having a large enough force, cost of training, the issues surrounding removing officers from their duties to attend a 40-hour training, and lack of mental health resources were cited as challenges faced when considering implementing a CIT program (Compton et al., 2015). As with previous studies, the survey results from the officers showed that those trained in CIT were less likely to use force in response to a psychotic individual (Compton et al., 2015).

### **Effectiveness of CIT: Knowledge, Perception, and Attitudes of Police Officers**

While CIT has been implemented in police departments through the United States, little research had been done until recent years regarding the effect CIT had on police officer's knowledge, attitude, self-efficacy, skills, and stigma about mental illness, (Compton et al., 2014a). With police officers being available to assist their community on a 24/7 basis, the likelihood that officers will have repeated interactions with mentally ill suspects is great. Officers are not only required to respond to such calls, but they are in many cases expected to act in the manner better suited for a mental health professional, yet their police training has not prepared them to take on such a role (Watson & Angell, 2013). Police officers have reported that the mentally ill suspects that they encounter do not react to regular police procedures, and thus can result in a longer call for service for the officer, as well as increase the possibility of injury for both the mentally ill individual and the police officer (Canada, Angell, & Watson, 2012; Watson & Angell, 2013).

While most individuals with a mental illness do not pose a criminal threat to society, those with a major mental illness do represent a higher rate of violent and non-violent crimes when compared to the general population (Ogloff et al., 2013). Aggression between police and the mentally ill is primarily due to officers' lack of understanding of mental illness, as well as false belief that individuals with a mental illness are violent and uncontrollable (Canada, Angell, & Watson, 2012). Police interaction with the mentally ill is not limited to the individual being the suspect in some form of criminal activity, but also in situations where they are victimized by others, are witness to a crime, the subject of a nuisance call, or needing to be transported to a mental health facility (Desmarais et

al., 2014; Margolis & Shtull, 2012). We see through the following studies that the outcome of the interaction between police officer and mentally ill suspect depends heavily on the beliefs and attitudes held by both parties. By understanding first how those with a mental illness perceive police officers, or others in authority, the officers can then fully understand the importance of CIT training.

### **Attitudes and Perceptions of the Mentally Ill**

The perceptions that police officers and people with a mental illness have of one another can be an important factor in determining the outcome their interactions (Desmarais et al., 2014). Through the lens of policing, the contact theory indicates that the attitudes that people develop about the police is directly related to if individuals feel that they are treated fairly by the officers (Desmarais et al, 2014). Research in this area shows that the attitudes that people with a mental illness and police officers have of each other may impact the outcome of their interactions with one another (Desmarais et al, 2014; Watson & Angell, 2013). Desmarais and colleagues reported on studies that looked at the attitudes of police officers and the mentally ill. It was reported that most mentally ill individuals were dissatisfied with the way they were treated by both the police officers, as well as the mental health professionals that they may subsequently encounter because of their police interactions. The mentally ill individuals reported that their expectations of the police were that they would be dealt with in an antagonistic manner (Desmarais et al., 2014). Another study looked at 20 individuals with a mental illness that had contact with police officers within the past 12 months (Desmarais et al., 2014). Results indicated that the mentally ill suspects were afraid and distrustful of police

officers prior to their encounters, yet most individuals reported that they were treated positively and appropriately by police (Desmarais et al., 2014).

In order to add to the research base, Desmarais and colleagues (2014) conducted research to look at the attitudes that mentally ill individuals have towards police and compare them to the attitudes held by the general population. Participants with a mental illness were chosen for this study from surveys of a larger study and contained both individuals with and without a prior history of interaction with police. Individuals from the general population were selected from a national household survey regarding the criminal justice system. Results of this study was consistent with similar studies in that the individuals with a mental illness had significantly more contact with police than those in the general population. Both groups generally reported a positive perception of the police, with 54.5% of the mentally ill group and 69.6% of the general population group reporting confidence in the police (Desmarais et al., 2014).

Watson and Angell (2013) conducted a study using the procedural justice theory, which has been utilized to understanding the compliance of individuals with authority figures. The study consisted of individuals from a public mental health system, and the majority were poor and African American, thus ensuring that they were a part of the most marginalized groups (Watson & Angell, 2013). The results indicated that citizens that believe they have been treated with procedural justice by the police were more inclined to cooperate with the police (Watson & Angell, 2013). However, the individual's level of perceived stigma affected their level of cooperation, with individuals that have a higher level of perceived stigma failed to hold the association between procedural justice and

cooperation (Watson & Angell, 2013). Their study further indicated that police officers that use empathy and respect, while avoiding the use of force, are more likely to resolve calls for service involving mentally ill suspects safely.

### **Attitudes and Perceptions of Police Officers**

Canada, Angell, and Watson (2012) studied both CIT and non-CIT trained police officers and their interactions with the mentally ill. The outcome of calls for service involving a mentally ill suspect can weigh heavily on how the police officer perceives and reacts to the scene. Police officers are more likely to react to the situation based on the nature of the scene and the attitude of the suspect than they are having foreknowledge of a suspect's mental status (Canada et al., 2012). Likewise, the mentally ill suspect will react to the officer based on the officer's style of communication, the position they take when speaking with the suspect, the language they use, and how long the officer is involved with the suspect on scene (Canada et al., 2012). CIT training discussed those very items with officers, helping them to alter how they handle themselves on a call.

With one of the goals of CIT being to reduce the number of unnecessary arrests of those individuals with a mental illness, both CIT and non-CIT trained officers have ways of evaluating a suspect to determine the level to which they are a threat to themselves or others. Canada, Angell, and Watson (2012) found that CIT trained officers demonstrated the ability to perform a more thorough assessment of the suspect, which includes understanding various behaviors that can be exhibited because of a mental illness. One officer interviewed identified a specific portion of the CIT training that was effective for helping to understand certain behaviors. The training section included the duplication of

auditory hallucinations by using headphones while having police complete various tasks that include some level of concentration. This demonstrated to the officers that silence or failure to respond to their questions by a suspect may not be a sign of defiance, but rather an indicator that the individual is hearing sounds and voices that are keeping them from being able to focus (Canada et al., 2012). The study concluded by reporting that CIT effectively equips officers with tools needed to resolve calls involving a mentally ill suspect without using force, thus meeting another CIT goal of improving officer and suspect safety (Canada et al., 2012).

J. L. Prince (2013) conducted a study of the CIT program in Washington D.C. and the impact it had on police officers. Some of the officers reported that following the completion of CIT training, they felt more comfortable with asking direct questions about a subject's mental status, as well as spending more time with the individual to fully assess their needs (Prince, 2013). Other officers reported being less apprehensive around subjects with mental illness, more patient with these subjects, and more likely to utilize mental health services within the community that they had not prior to CIT training. The officers learned and practiced skills during CIT that would allow them to better build a rapport with a mentally ill suspect, thus both increasing their confidence and putting them at ease, which in turn created an increased willingness to follow direction by the subject (Prince, 2013).

Compton et al. (2014a) reported that following the 40-hour CIT training, police officers had statistically significant changes to their knowledge, attitude, and perception of people with a mental illness. One of the main portions of the CIT training that the



study credits with helping change the attitudes of police officers is hearing the personal stories of individuals with a mental illness and families of those with a mental illness. By hearing how various treatments within the community have helped them with their psychiatric or substance abuse issue, the officers were better informed about and more willing to use those recourses for a subject rather than make an arrest (Compton et al., 2014a). Compton et al. (2014b) conducted a second study on the outcomes of CIT training, reporting that police officers that completed CIT training repeatedly demonstrated a greater knowledge of mental illness, diverse attitudes towards mental illness, treatments available for the mentally ill, the stigmas associated with mental illness, de-escalation skills, and decision-making skills regarding appropriate referrals for subjects. The study reported that their findings support the idea that CIT trained officers have a significant increase in their knowledge and skills surrounding dealing with mentally ill suspects (Compton et al., 2014b).

Barcelos (2014) conducted a study in Connecticut to review the effect that CIT training has on the beliefs held by police officers. The police officers that participated in the study reported that following the CIT training program, they had a more positive attitude towards individuals with a mental illness and expressed an increased readiness to interact with such subjects, thus confirming the findings of other CIT studies. The results also indicated that officers had a significant decrease of desired social distance and an increase in self-efficacy following CIT training (Barcelos, 2014). According to Barcelos (2014), these findings indicate that police officers trained in CIT have greater confidence when dealing with mentally ill suspects than non-CIT trained officers.

Barcelos (2014) goes on to report that police officers feel they are better prepared to handle situations involving a mentally ill suspect, they are more likely to approach other crisis situations in a safe and effective manner. The study also indicated that officers that received mental health training prior to CIT, such as at the police academy or directly through their department, will see an improvement of skills that were already better developed than those officers that received no prior training. In Barcelos' study, Connecticut officers that completed CIT training had already completed either a 4-hour course on mental illness through the municipal law enforcement agencies or a 2-hour course through the state's police academy. While these training courses gave officers a greater understanding of mental illness, they can serve as a useful pre-CIT training introduction, helping to education officers on some of the basic premises involved (Barcelos, 2014).

Bonfine, Ritter, and Munetz (2014) completed a study involving the survey of police officers that had completed CIT training to look at how they perceive CIT has impacted them. The study produced three major findings, the first of which was that CIT officers believed that they were positively impacted in areas of safety for all involved, accessibility to the mental health services in the community, improvement in their knowledge of mental illness, an increase in their skills in interacting with the mentally ill, and greater confidence in handling such calls for service (Bonfine, Ritter, & Munetz, 2014). Second, CIT trained officers felt better prepared overall, especially regarding their skills in dealing with individuals with a mental illness. The study also noted a positive correlation between the frequency with which officers discuss mental illness with

significant others and their feelings of confidence in the subject, suggesting that this may relate to how they view the role they play in the field (Bonfine, Ritter, & Munetz, 2014). The third finding is that the CIT officer's attitude towards overall safety and preparedness positively associate with how they see the effectiveness of their department (Bonfine, Ritter, & Munetz, 2014).

This collection of studies has shown that a definite connection exists between CIT training and police officers having a positive view of individuals with a mental illness. CIT-trained officers have demonstrated that their use of newly acquired de-escalation skills as well as a greater understanding of mental illness have improved the relationship between law enforcement and those in the community with a mental illness. Equipped with this knowledge and skills, as well as improved confidence, CIT-trained police officers are treating mentally ill suspects with respect, thus in essence reducing the stigma of mental illness and helping to remove the label of "criminal" for these individuals. As reported previously, the labeling theory states that individuals that are designated as deviant by society will eventually fulfill this label through their actions. Therefore, if CIT training programs can help re-label the mentally ill through educating officers, there should be a reduction of criminal activity according to the labeling theory.

### **Effectiveness of CIT: Disposition of Calls for Service**

Research on mental illness and criminal activity shows that approximately 15% of men and 31% of women in jails or prisons have a serious mental illness, and many are there due to a lack of understanding of symptomology by the arresting officer (Compton et al., 2014b; McCabe et al., 2012). Individuals with a major mental illness, such as

schizophrenia, are at a higher risk for criminal behavior because of an existing co-occurring condition, such as a substance abuse issue or antisocial personality disorder (McCabe et al., 2012). A study of individuals that received services through a mental health clinic over a one-year period ( $n=13,816$ ) was conducted to look at the arrest patterns of those with a serious mental illness. The arrest data for this study was categorized into six groups: serious violent crimes and forcible rape, less serious violent crime, property crimes, crimes against public order, crimes against public decency, and motor vehicle crimes (McCabe et al., 2012).

Results indicated that substance abuse was present in close to half of the subjects in the study, while antisocial personality disorder and impulse control disorders were the least prevalent (McCabe et al., 2012). The combination of schizophrenia and antisocial personality disorder was found to be a significant contributor to arrests in many different categories, while a diagnosis of posttraumatic stress disorder was associated with a higher level of violent crimes (McCabe et al., 2012). With police officers encountering a wide range of psychological issues on the job, one of the main goals of the CIT program is to provide law enforcement with an alternative to making an arrest while still meeting the needs of the individual and the surrounding community.

In a previously mentioned study by Canada et al. (2012), a review of feedback from police officers, Sergeants, Lieutenants, and Captains indicated many positive aspects to the CIT program, regardless of whether the respondents had completed the 40-hour training. The study looked at several differences between CIT and non-CIT trained officers, including the disposition of the call. The disposition refers to the outcome of the

call for service involving an individual with a mental illness, including arrest or hospitalization. The results were that CIT trained officers could identify more alternatives to arresting a suspect than non-CIT trained officers. CIT officers reported that they not only transport individuals to the hospital in emergency situations, but they have interacted with mentally ill subjects in non-emergency situations and offered referrals to community services, transport to the hospital or a doctor's office, and information about services that may benefit the individual (Canada et al., 2012). Even in communities where there are limited mental health resources for the community, CIT officers were still able to provide alternative outcomes to calls other than making an arrest or having the individual involuntarily committed to the hospital (Canada et al. 2012).

The study by Compton and colleagues (2014b) which looked at the outcomes of CIT training programs showed that most police officers do not have a strong understanding of mental health issues, mental health resources within their community, or if they do know of the resources, they have limited trust in them. The CIT training has been able to provide knowledge and hands-on experience for police officers, thus attempting to reduce the number of people being sent to jails. The CIT program has become one of many different jail diversion programs in the country (Compton et al., 2014b).

Data was collected from 1,063 interactions between police and mentally ill individuals, and the dispositions of these calls were broken down into three categories: resolved on scene, referral to services, and arrest (Compton et al., 2014b). The results indicated that 48% of these interactions were resolved on scene with no further action

required. In this category, there were insignificant differences between CIT and non-CIT officers in this area. In the other two categories, however, the differences between CIT and non-CIT officers were significant. A total of 34% of the dispositions included either a referral to local mental health services or transportation to a hospital by officers, with CIT officers accounting for 40% and non-CIT officers 29% (Compton et al., 2014b). As for arrests, a total of 19% of the calls ended with an arrest, with CIT officers comprising 13% and non-CIT officers 24% (Compton et al., 2014b).

Compton et al. (2014b) also reported that “the effects of CIT on referral and arrest were strong and statistically significant when physical force was required and weak and not statistically significant when physical force was not used” (p. 528). This supports the CIT goal of preventing arrests, showing that even when CIT officers had to resort to physical force, usually because of resistance on the part of the subject, they were still more likely than non-CIT officers to provide referrals to mental health services than to make an arrest (Compton et al., 2014b). CIT officers were least likely to make an arrest when they were dealing with an individual with a mental illness only, while they were most likely to refer a subject to services if the individual was exhibiting substance abuse symptoms only (Compton et al., 2014b).

The few studies that have provided recent statistics regarding call disposition following CIT training, including arrest rates and referrals to mental health services, have looked at a variety of factors in relation to CIT outcomes. Most of CIT research has focused on the police officers that have completed training, and comparing their beliefs, knowledge, and attitudes towards mental illness with non-CIT-trained officers. Few

studies have looked specifically at whether CIT training lowers the arrest rates in communities where it has been established. With the previous studies regarding police officer's attitudes and knowledge showing a significant change following CIT training, it can be argued that CIT-trained officers help to re-label the mentally ill according to the labeling theory. According to the labeling theory then, there should be a recognizable reduction in the arrest of mentally ill suspects.

### **Effectiveness and Limitations of CIT**

Reviews of police contact with the mentally ill have shown that approximately 10% of calls for service will place officers in contact with a mentally ill suspect, and that most individuals that have contact with police will be arrested at least once (Blevins et al., 2014). The claims of the CIT program are that it will help connect individuals with a mental illness to much needed services, reduce the number of arrests made of the mentally ill, increase safety of officers and suspects, lower the time officers spend on calls for service involving a mentally ill suspect, and reduce repeat calls for service (Blevins et al., 2014). While there are few studies that provide empirical evidence that these claims are accurate, the available studies have shown that CIT programs improved police attitudes towards the mentally ill, increased their knowledge of mental illness, and have increased their level of confidence when dealing with a mentally ill suspect (Blevins et al., 2014; Canada et al., 2012; Compton et al., 2014a; Desmarais et al., 2014).

Although limited, there have been some reports regarding the Memphis CIT model stating that the program has helped to reduce the number of arrests of mentally ill suspects, as well as increased the number of diversions to mental health resources (Franz

& Borum, 2011). In one Chicago CIT study, there was no difference in arrest rates found between CIT and non-CIT trained officers, yet the CIT trained officers were more likely to utilize the resources within their community to provide mental health assistance to subjects (Watson & Fulambarker, 2012). Studies have also shown that the use of specialized units, such as SWAT teams, has decreased following the implementation of CIT, as well as an increase in less-lethal use of force tactics when necessary (Morabito et al., 2012; Watson & Fulambarker, 2012).

Limitations to CIT programs begin with the many variations of the program implemented across the country. Modification from the established Memphis model are done to meet specific needs of the police department, while others are due to limitations that prevent the program from being achieved effectively (Watson & Fulambarker, 2012). One of the challenges that larger cities with CIT programs have reported is the inability to have a centralized psychiatric drop-off point that gives priority to officers. In fact, only approximately one-third of CIT programs had a formalized agreement with a mental health facility to act as a drop-off point. In more rural areas, psychiatric help for a suspect may call for a significant drive to another area, thus extending the officer's time from the street (Skubby, Bonfine, Novisky, Munetz, & Ritter, 2013). In areas with limited resources available for officers, the CIT programs tend to be viewed in a negative light (Morabito et al., 2013). Other police departments have reported the inability to utilize local mental health professionals to actively participate in the required 40-hour training, which in turn limits the ability to effectively train officers (Skubby et al., 2013; Watson & Fulambarker, 2012).



The Memphis model is designed so that officers volunteer to attend the program training, ensuring that only those officers with a desire for helping with mental health calls represent their department as CIT officers. By utilizing only officers on a volunteer basis, the goal of CIT programs is to have anywhere from 10 to 25 percent of the force CIT trained. Some police agencies have adopted a more aggressive approach by requiring all officers to be CIT trained, thus given officers few chances to utilize their specialized training and improve their skills (Morabito et al., 2013; Watson & Fulambarker, 2012). The time and variety of resources that go into the 40-hour CIT training may limit the number of trainings that can be conducted, thus limiting how soon departments can have their officers trained.

One study that reviewed CIT programs in rural communities discovered potential limitations to CIT programs being successfully implemented and sustained. It was found that police officers and mental health professionals had different views and opinions about the mentally ill population and the appropriate actions that should be taken, and their differences could have a negative impact on the development and implementation of CIT in a community (Skubby et al., 2013). The study found that established CIT programs in rural communities face the issue of maintaining funding for mental health programs for the resource to remain a local option for law enforcement.

### **Summary and Conclusions**

Research has shown us that police officers come into regular contact with mentally ill suspects, and that most of the violent encounters between these subject and police is due to officers' lack of understanding and false beliefs about mental illness. A

review of CIT programs, especially the Memphis model, have shown that the program was designed to train those officers that volunteered for the program, and that police departments should ideally have somewhere between 10 and 25% of their sworn staff CIT trained. Successfully implemented CIT programs should also include a special training for call-takers and police dispatch to help better identify the presence of a mentally ill individual at a call for service. The program must also include a formal agreement between law enforcement and local mental health professionals, including a central drop-off point for psychiatric emergencies where officers will be given priority treatment.

This review of the literature has demonstrated that the various studies surround the CIT programs have focused on several variables with mixed results. Throughout the studies, however, it is apparent that police officers that complete the 40-hour CIT training are more likely to employ empathy and respect to ensure that calls for service are concluded in a safe manner. When compared to non-CIT trained officers, those that have received the specialized training have shown a greater knowledge and understanding of mental illness, held more positive attitudes towards those individuals with a mental illness, have demonstrated more effective de-escalation skills, and have learned what resources are available within their community and have demonstrated a greater likelihood to incorporate their assistance when dealing with the mentally ill. While studies looking at the instances of use of force between CIT and non-CIT officers indicated little difference, the level of force used by CIT officers was consistently less aggressive.

One of the goals of CIT programs is to reduce the number of arrests of individuals with a mental illness. While some studies claim that CIT training does lower arrest rates, the overall research has given mixed results on the matter. While it may not be sufficiently proven that CIT officers make fewer arrests, studies have clearly shown that they are more likely to utilize mental health resources for a suspect than a non-CIT officer. Some of the hindrances that CIT research may be facing is due to the differing modified versions of CIT that have been implemented throughout the country. Unlike the guidelines placed by the Memphis CIT model, some agencies mandate CIT training for officers rather than allow officers to volunteer for the program, thus overloading the department with CIT training officers beyond what is suggested. Challenges for successful implementation of CIT can differ between urban and rural agencies in terms of establishing the necessary connections with local mental health treatment facilities.

## Chapter 3: Research Method

### **Introduction**

I conducted this quantitative quasi-experimental design study, to measure the effects of CIT training on the arrest rates and diversion rates of mentally ill suspects. To measure possible effects, reports from police officers who completed CIT training for a 6-month period before and a 6-month period after the training. The purpose of this study was to determine if CIT training influences the arrest and diversion rates in police contact for individuals who are identified as having a mental illness. The results of this study contribute to the existing body of knowledge on the effectiveness of CIT training and how implementing the program may affect arrest and diversion rates.

In this chapter, I discuss the research design used for this study, as well as the rationale behind the decision to carry out the study in this manner. In the next section, I describe the target population and the population size related to this study. Sampling for this study is discussed, including the sampling strategy and how the sample size was determined. Because this study involved use of archival data, this chapter includes a section on how the data were accessed and collected, and how permission was granted from the police department. I explain the use of a one-group pretest-posttest design for this study and a paired sample t-test used to interpret the data. In the chapter, I also identify the study variables and discuss how they were coded into IBM SPSS 24.0. The data analysis method is outlined, including the statistical method and the procedures for interpreting the data. Finally, threats to internal and external validity are examined, followed by a summary of the chapter.

### **Research Design and Rationale**

In this study, I examined the effects of CIT training on the disposition of calls for service where police officers responded to an incident involving a mentally ill suspect. The dependent variable for this study was the disposition of the call, specifically whether the officer made an arrest or used community resources to refer the subject for assistance. The independent variable was the CIT training completed by police officers. The CIT program is a 40-hour training program for police officers, which acts as an effort between law enforcement, families of the mentally ill, and treatment resources within the community (Morabito et al., 2013; Usher, 2013; Watson & Fulambarker, 2012). CIT training is conducted as a collaboration between mental health professionals and police leadership, and includes modules on legal issues, de-escalation techniques, and recognizing mental health disorders, including dementia and substance abuse (Canada et al., 2012; Watson & Fulambarker, 2012). CIT programs also require that the community provide police officers with a centralized emergency drop-off location that they can utilize while on calls; thus, the CIT training includes providing officers with information regarding resources available within their community (Watson & Fulambarker, 2012).

I selected only those police officers who have completed the 40-hour CIT training program for this study. I compared the outcomes of their calls for service involving mentally ill suspects both pre-and post-CIT training. Police reports for the department in the study are created, archived, and retrieved from a program called I/Leads, which is a records management system used by public safety and security systems (Officer.com, 2007). The program can retrieve reports with numerous designated variables, allowing

the user to select police reports by specific officers and specific time frames. By utilizing these parameters, only those police reports the officer sample during the 12-month period were accessed and reviewed. I carried out this quasi-experimental, quantitative methods study using a one-group pretest-posttest design to review the police reports of officers selected. A paired samples t-test was chosen to analyze the data collected to determine if there was a statistically significant difference between the calls for service outcomes pre and post CIT training.

I chose a quantitative research design over a qualitative or mixed-methods approach as the goal was to compare data from one group, both pre-and post-CIT training. The one-group pretest-posttest design was selected in order to gain knowledge about the effectiveness of programs like CIT, while being able to study the same group of people at different points in time (Marshall, Higginbotham, Harris, & Lee, 2007). Although much of the literature on CIT research centers on how the training has effectively changed the police officers who underwent the training (Barcelos, 2014; Bonfine, Ritter, & Munetz, 2014; Canada, Angell, & Watson, 2012; Compton et al., 2014a; Compton et al., 2014b; Desmarais et al., 2014; Prince, 2013; Watson & Angell, 2013), the outcome of arrests and diversions was my study focus. Thus, a one-group pretest-posttest design was the best fit.

The research questions for this study were developed due to limited quantitative studies that reported on the effects of CIT training on the arrest and diversion rates within a single police department. Because I used existing data found in the police reports of CIT-trained officers in the study, I did not need to have contact with any officers in order

to collect the necessary data. It was also unnecessary to have contact with the suspects or family members mentioned within the police reports .

### **Methodology**

The target population for this study was all CIT-trained police officers responding to calls for service from the police department in the selected city in the southwestern United States. The city has a population of approximately 208,500 citizens, and, according to the Fiscal Year 2016 report for the city's police department, 157 patrol officers, 26 sergeants, and nine lieutenants responded to a total of 68,606 dispatched calls for service. The department reports a total of 75 CIT-trained officers, which excludes detectives and supervisors.

### **Sampling Strategy**

Police officers who have received CIT training and whose daily duties included patrol activities of responding to calls for service were selected to be studied, as they were the only CIT trained personnel who utilize their training as designed. Because I reviewed reports over a 12-month period, I included all CIT trained officers who worked as a patrol officer for both the 6-months pre- and 6-months post-CIT training for the study. Any officer that did not work the full 12-month period in patrol, due to circumstances such as special assignment, injury, or promotion or transfer to a non-patrol function were excluded.

A list of all police officers who have completed CIT training is maintained by the CIT coordinator for the police department. I was provided a copy of this list by the coordinator. I eliminated any individual on the list who was not on active patrol 6 months

pre and post training from the sample. This included any detectives, undercover officers, or members of the command staff. In order to maintain anonymity and prevent any bias in the data collection and analysis process, the remaining officer names were listed by badge number. The badge numbers were then entered onto an Excel spreadsheet where the data collected from the police reports were documented.

### **Sample Size**

In order to determine if CIT training has a significant effect on the arrest and diversion rates for police officer, a power analysis was conducted based on the sample size of  $N = 30$ . As a result of the power analysis, the effect size was set at 0.5, the significance level at 0.05, and the power level at 0.492.

### **Use of Archival Data**

I obtained permission to conduct the study and review police reports needed for this study from the command staff at the police department where the study was conducted. The police reports that were utilized for this study are managed and archived using the I/Leads software. Access to the I/Leads system requires an assigned log in, which was provided by the administrator of the program. To ensure that the information contained with the I/Leads system was accessed by approved personnel only, a password was created. Setting search parameters, including the identification number of CIT trained officers and entering a date range of 6 months pre-and post CIT training, was done when accessing police reports in the I/Leads program. Collecting data directly from the police reports was necessary due to there being no other reports generated within the department to provide the necessary information regarding this involvement of a CIT



trained officer. Rather than reviewing specific calls for service types, With the types of calls for service that involve a mentally ill suspect varying, all calls for service where a police report was generated within the set timeframe for each CIT officer was reviewed to determine its appropriateness for inclusion in the study.

### **Operationalization of Constructs**

#### **Arrest.**

An arrest, for this study, is defined as either a formal arrest or a long-form arrest. A formal arrest consists of the police officer detaining a suspect, transporting them to the police station, and then completing the booking procedures. The police officer would then file the charges with the prosecutor's office, and the individual will either be released from police custody or transferred to the county jail. A long-form arrest still involves the officer forwarding charges to the prosecutor's office, however the suspect is not taken into custody on the scene. In both cases, the police reports state that the call was cleared by arrest

Diversion. A diversion, for this study, is any action taken by the officer with the intention of aiding the suspect rather than arresting them, thus diverting them from the justice system. A diversion occurs when probable cause exists for the officer to make an arrest, yet the decision is made to take other measures to resolve the situation. It was not considered a diversion if a crime had occurred or probable cause existed to act against an individual, yet the officer chose to neither arrest or offer resources. If no crime occurred, then there was no threat of an arrest that would have potentially placed the individual into the justice system. A diversion was identified by reviewing the narrative at the beginning

of the police report, as well as the conclusion summary at the end of the report. In these areas, the officer explained if resources were provided to the individual. If the narrative or summary reported that resources were given but did not include information regarding a law having been violated, further review of the police report was completed to determine if the resources provided was be considered a diversion.

Finally, reviewing the narrative and summary sections of the police reports involving CIT officers revealed if community resources were provided to the subject in the call for service, thus indicating a possible diversion. When dealing with a mentally ill subject that needs immediate treatment, including substance abuse issues, the main resource utilized by the police department is Community Bridges, Inc. (CBI). Whether the suspect wanted to receive services voluntarily, or they had been determined by officers to be a danger to themselves or others, CBI works with the surrounding cities to provide immediate service for police officers responding to their location 24-hours a day.

Other resources available for officers to use and offer to mentally ill subjects include the Urgent Psychiatric Care Center (UPC), Partners in Recovery (PIR), the National Alliance on Mental Illness (NAMI), and several local emergency rooms. Officers can utilize UPC in a similar manner that they would CBI. Located in a neighboring city, UPC was at one point one of the only options for police officers when either transporting a mentally ill subject for involuntary committal or providing any type of psychiatric referral for a mentally ill subject prior to CBI becoming a 24/7 service point. UPC is an adult only facility that provides assessments, medication services, counseling for individuals or groups or those in crisis, and court ordered evaluations and

treatment. Through the collaboration three different behavioral health providers, PIR provides counseling services for individuals with mental illness, as well as support for their family, peer support and case management, wellness services, crisis recovery, and job training. Finally, NAMI is a national organization that provides numerous services for individuals with mental illness and their families. Individuals referred to NAMI can receive free education regarding recovery and mental illness, setting goals, dealing with the stigma of mental illness, overall wellness, and peer support.

Mental health calls. A mental illness incorporates a wide variety to diagnosable disorders, which in turn present a diverse array of symptoms affecting a person's thoughts and feelings, many of which become apparent to police officers as they interact with such subjects. Officers that have completed CIT have undergone training on recognizing the signs of mental illness, which include the inability to be alert and oriented to person, place, time, and the situation. A mentally ill suspect may present with hallucinations and delusions, confusion that interferes with their ability to communicate effectively, and the appearance of unwarranted anger or aggression. A mentally ill individual, for the purposes of this study, is defined as those that are exhibiting such symptoms or are unable to function at the time of their encounter with the police and have either self-identified their diagnosis with a mental illness or a friend or family member with knowledge of the suspects mental illness has reported such to police. All police reports completed by CIT officers within the 12-month period surrounding their CIT training were reviewed to identify the presence of a mentally ill suspect.

To gather the archival data needed for this study, the I/Leads system was accessed on a secured computer utilizing an assigned user name and password. A list of all CIT trained officers was provided by the department's CIT coordinator and the identification number of each of these officers was entered individually prior to each search. Next, the time parameters were set for the I/Leads search, beginning 6-months prior to CIT training and ending 6-months post CIT training for the identified police officer. The reports retrieved from I/Leads were then reviewed individually for the involvement of a mentally ill suspect. All the reports identified as involving a mentally ill person were reviewed and disposition of the call was documented, which served as the dependent variables in this study.

If an arrest was made, the call was coded as "A". For each disposition where an arrest is not made (while probable cause exists), and a diversion was noted, the call was coded as "B", and was then reviewed to determine which resources were provided to the mentally ill suspect. Each diversion was tracked and coded under "B" to determine the resources used by CIT officers. Additional information that was gathered and noted from the data including any police report involving a mentally ill suspect where the disposition indicated that no arrest was made, yet probable cause existed, and a diversion was not noted. All resources provided to the suspects, regardless of the disposition of the call, were also documented. Each police officer's gender, as well as their years of service at the time of their CIT training, was reported along with the results of the data analysis.

## **Data Analysis Plan**

All the statistical analysis used to answer the research questions were completed using IBM SPSS software, version 24. The research questions for this study are:

Is there a significant change in the rate of arrests of subjects with a mental illness made by CIT trained officers pre-and post CIT training?

Is there a significant change in the rate of diversions of subjects with a mental illness made by CIT trained officers pre-and post CIT training?

A paired samples t-test was used to compare the means of the outcomes of calls for service involving mentally ill suspects pre-and post CIT training for arrest and diversion rates. The paired samples t-test was the most appropriate statistical test for this study since the hypotheses were made regarding the difference in means between the two measures (Field, A., 2013). A separate paired samples t-test was conducted for arrest rates and diversion rates.

There are two hypotheses for this study, both looking to determine if the CIT training completed by officers significantly alter the outcomes of calls for service involving mentally ill suspects. The first hypothesis predicted that the CIT trained officers make fewer arrests of mentally ill suspects following their CIT training when compared to arrests made prior to the training. The second hypothesis predicted that the CIT trained officers divert mentally ill suspects to community resources for help following their CIT training when compared to before completing the training.

To test these two hypotheses, police reports for the CIT trained officers were reviewed for a six-month period prior to completing the 40-hour training. A total of all

arrests and diversions involving a mentally ill suspect was established. A study of reports by these same officers were reviewed for a six-month period following their CIT training. Again, a mean of arrests and diversions was determined. Finally, a paired samples t-test was completed for both arrests and diversions, respectively comparing the means pre-and post CIT training to determine if the null hypotheses could be rejected, thus establishing that CIT training resulted in lowered arrest rates and higher diversion rates.

The first research question for this study was, is there a significant change in the rate of arrests of subjects with a mental illness made by CIT trained officers pre-and post CIT training?

$H_01$ : There is not a significant change in the rate of arrests of subjects with a mental illness made by CIT trained officers pre and post CIT training.

$H_11$ : There is a significant change in the rate of arrests of subjects with a mental illness made by CIT trained officers pre and post CIT training.

The second research question for this study was, is there a significant change in the rate of diversions of subjects with a mental illness made by CIT trained officers pre-and post CIT training?

$H_02$ : There is not a significant change in the rate of diversions of subjects with a mental illness made by CIT trained officers pre and post CIT training.

$H_12$ : There is not a significant change in the rate of diversions of subjects with a mental illness made by CIT trained officers pre and post CIT training.

## **Threats to Validity**

### **External Validity**

Threats to external validity for a quasi-experimental study include the interaction between the selected subject and the treatment, the interaction between the setting and the treatment, and the interaction between history and the treatment (Creswell, 2014). In this study, the interaction between police officers that participated in and completed CIT training and the 40-hour training program itself may have presented a problem with external validity when reviewing whether the participating officers voluntarily completed the CIT training, or if they were required to participate by their department. The goal of the Memphis Model of CIT training is that a police department train only 20 to 25 percent of its sworn officers, selecting those officers that have wish to complete the training voluntarily (Watson & Fulambarker, 2013). Additional research comparing voluntary and involuntary participants would help to resolve the validity issue (Creswell, 2014), and there are no current studies in the literature that officers receiving CIT training on a voluntary or involuntary or more effective than the other (Watson & Fulambarker, 2013).

Regarding the external threat of the interaction between the setting and the treatment, this study was conducted using CIT trained officers that had attended the same CIT training school, which is comprised of CIT coordinators from four other cities in the area. The coordinators meet on a regular basis to ensure that the training modules are kept up to date and consistent throughout each of the quarterly trainings. All officers in this study that completed the CIT training had done so through this same school. This reduced

the issue with validity between officers that received CIT training at different times through the same school, however it does not address the issue of validity when comparing officers trained through this school and other schools throughout the state or country.

Finally, external validity can be influenced by the interaction between history and the treatment. This research reviewed the dispositions of calls for service involving mentally ill subjects six months pre-and post CIT training. By putting a time limit on the study, inferences to how officers have responded to mentally ill suspects beyond the six months prior to CIT training, or predictions on how an officer will respond in the future cannot be made (Creswell, 2014). To determine if the results of the study continue past the given time frame, the study would need to be replicated at a later time (Creswell, 2014).

### **Internal Validity**

One potential threat to internal validity, just as in external validity, is history. Events that occur during the duration of the experiment can affect the internal validity of the study (Creswell, 2014). During the 12-month timeframe where data for the study were collected, there are experiences that officers may have had that could potentially influence the disposition of their calls for service involving mentally ill suspects. While there was no way in which to control what an officer experiences during their duties, the CIT training program is designed to normalize mental illness and give officers a better understanding of why an incident occurred.



In quasi-experimental studies, maturation can be a threat to internal validity, occurring when participants change during the experiment (Creswell, 2014). While the research involved police officers in different stages of their career, it was not be feasible for this study to compare separate groups designated by years of service. Due to the short nature of the pre-and post-timelines, the issue of maturation is minimized.

Selection of participants can pose a threat to validity, and in this study, most of the officers that received CIT training within the department did so on a voluntary basis. While the issue of completing an intensive training on a voluntary or mandatory basis may have visible consequences for many programs, the studies concerning CIT have not found a noticeable difference between these two groups. Since all the officers selected for this study were required to have worked in a patrol position for 6 months before and after CIT training, the issue of mortality is also removed as a possible threat to validity. Any officer that is unable to utilize their CIT knowledge and skills in the field following their training, due to a promotion or transfer to a non-patrol duty, or due to no longer being employed by the department, were eliminated from the sample for this study.

### **Ethical Procedures**

Since this study focused on archival data from a single police department, a data use agreement, along with a letter of approval were both obtained from the police department. Due to the use of archival data, there was no recruitment or any interaction with any of the police officers, suspects, or witnesses involved in the calls for service. There was information contained within the police reports used for the study that were considered confidential. This included any identifying information of an individual under

the age of 18, as well as anyone identified as the victim of a crime. Since this study was concerned with identifying calls involving a mentally ill suspect and the outcomes of those calls, obtaining any personal or identifying information was unnecessary and was not carried out in order to preclude any ethical concerns. All articles of identifying information, such as the suspects' names, witnesses' names, police officer names, or details of locations listed in the police report were not documented as part of the data set, and therefore not used as part of the research. Data was collected using CIT trained officer's badge numbers, which themselves was also be excluded from the report on this study's findings. The information gathered from the police reports that were reported in this study were non-identifying data.

The information gathered from the police reports were entered directly into a spreadsheet and stored on an encrypted and password protected computer within the police department. This researcher was the only employee to have the passwords to access the computer, other than the computer systems administrator for software maintenance. However, the information contained within the spreadsheet did not contain any data that would be able to identify any suspect, victim, or others mentioned within a police report. The data was stored for six-months following the study's completion before it was erased from the database.

Another ethical consideration for this study surrounds the fact that the data collected was from this researcher's place of employment. However, since there was no direct interaction with police officers whose reports were reviewed for data collection, the issues of bias or conflict of interest was mitigated. The choice to utilize archival data

was made, due this researcher having specific clearance and training to access and utilize the computer system used by the police departments in this study to store all police reports. By having permissions to access this data directly, this eliminated the need for other police employees to review and redact pieces of information prior to releasing the reports. Without having direct access to the reports, they would have to have been purchased from the department, which would have potentially created a financial hardship for this researcher.

### **Summary**

With a significant percentage of calls for service responded to by police involving mentally ill suspects, there has been an increased focus on the CIT programs implemented throughout the country and their effectiveness in meeting the programs goals (Canada, Angell, & Watson, 2012; Watson & Fulambarker, 2012). This quasi-experimental study compared data from pre-CIT trained police officers and post-CIT trained police officers (Creswell, 2014). The one group pretest-posttest design was used to gain knowledge from archival data regarding the effectiveness of the CIT program. The choice to develop the research questions mentioned in this chapter came from the lack of studies regarding the arrest and diversion rates over studies that focused on the attitudes of police officers following their CIT training.

All CIT trained police officers within the police department utilized for this study were selected to have their police reports reviewed for data collection. Archival data in the form of police reports were the only source for data collection, and the information was analyzed using IBM SPSS software. A paired samples t-test was conducted to

compare the means between the two groups regarding the outcomes of police interactions with mentally ill suspects. The following chapter reports on the data collection process, and results of the data analysis, including the hypothesis outcomes.

## Chapter 4: Results

### Introduction

In this study, I examined the effects of the 40-hour CIT training program on both the arrest and diversion rates amongst mentally ill individuals following interactions with police in a city within the southwestern United States. The data collected included service reports from 6 months prior to CIT training through 6 months following CIT training, and only included those officers who were working in a patrol capacity where their primary function was to respond to calls for service within the town. The dependent variable for this study was the disposition of the calls for service involving a mentally ill subject and whether an arrest was made, diversion to community resources was offered, or neither. The independent variable for this study is the 40-hour CIT training program completed by police officers.

The research questions and hypotheses for this study were, as follows:

Research Question 1: Is there a significant change in the rate of arrests of subjects with a mental illness made by CIT trained officers pre-and post-CIT training?

$H_01$ : There is not a significant change in the rate of arrests of subjects with a mental illness made by CIT trained officers pre-and post-CIT training.

$H_11$ : There is a significant change in the rate of arrests of subjects with a mental illness made by CIT trained officers pre-and post-CIT training.

Research Question 2: Is there a significant change in the rate of diversions for subjects with a mental illness made by CIT trained officer pre-and post-CIT training?

$H_02$ : There is not a significant change in the rate of diversions for subjects with a

mental illness made by CIT trained officers pre-and post-CIT training.

*H<sub>12</sub>*: There is a significant change in the rate of diversions for subjects with a mental illness made by CIT trained officers pre-and post-CIT training.

This chapter includes a review of the data collection process, including the time involved in gathering the data set, as well as any discrepancies in the data collection from the initial plan outlined in Chapter 3. I examine the demographic characteristics of the data sample and discuss how representative it is to the population of the police department. Then, I review the results of the study; I discuss descriptive statistics and statistical assumptions and then present the findings of the statistical analysis. Tables and figures are included to illustrate the results of the study.

### **Participants**

I began data collection by obtaining the list of CIT-trained officers from the police department's CIT coordinator. The list provided the names of 75 police officers; however, it did not include either the dates that the officers attended CIT training or their department identification number. The next step was to review CIT training rosters maintained by the CIT coordinator. The rosters provided training dates for 55 of the officers. Upon checking the records of the department's training division, the CIT coordinator was able to obtain the training dates of an additional six officers. My attempts to obtain the training dates for the remaining officers were unsuccessful. It should be noted that these remaining officers had been trained prior to the department's choice of a CIT training school used by smaller cities surrounding the large metropolitan city. Of the 61 officers listed, seven of those had completed their CIT training in

February 2018 and did not have a full 6 months of post-CIT training calls for service to qualify for this study. Of the 54 officers, 13 did not work in a patrol capacity for the full 12-month data collection period and were thus removed from the sample. After reviewing the data collected for the remaining 41 officers, I discovered that 11 officers had no documented contact with mentally ill subjects, either before or after the CIT training. Because there was not enough data to complete an analysis for these 11 officers, they were removed from the sample. This put the sample size for this study at 30. The selection of the sample was completed by June 14, 2018.

### **Data Collection**

The collection of data, which involved reviewing police reports for all CIT trained officers for 6 months pre- and post-CIT training, excluding those officers who did not work in a patrol capacity for those selected 12-months, began on April 24, 2018. The I/Leads database was used to obtain the employee identification numbers of the 54 CIT trained officers' ID numbers and the dates that they completed their CIT training were documented on an Excel spreadsheet. All police reports for each officer were accessed in the I/Leads system by selecting the date 6 months prior to the CIT training completion date and the completion date itself as the first search parameter, and then entering the officer's identification number as the second search parameter. Documentation of the total number of police reports for the officer from the search results was documented, and then a review was conducted of the list of reports. All reports where the officer had contact with a mentally ill individual were documented with the case identification number that is generated by the I/Leads system, as well as the outcome label of "A" if

arrested and “B” for diversion. No code was used if the disposition did not fit either criteria. Once completed, a second search was conducted with the officer, and the search dates were changed to the date following the completion of CIT training to the date 6 months post-CIT training. The process of reviewing police reports and documenting the dispositions was repeated. The Excel spreadsheet containing the collected data was password protected and stored on a computer at the police department that was also password protected. The spreadsheet was then copied onto a portable USB device that I used to conduct data analysis on a separate computer of mine once the data collection was completed, .

Discrepancies from Chapter 3 in the data collection process included utilizing the training records from the police department to find the training dates of some of the participants. However, this extra step ensured that all officers trained through the same CIT school were included in the study. Another discrepancy from Chapter 3 included combining the steps of identifying calls for service involving mentally ill subjects and documenting the disposition of the call. Rather than make a list of all calls for service and coding them as “yes” or “no”, it was again more efficient to document the case identification number of only those reports that did involve a mentally ill subject and immediately review the details to determine the disposition and code the call appropriately.



## Results

### Demographic Information

Of the 30 officers included in the sample, 17% (5) were women and 83% (25) were men, as shown in Table 1, compared to the entire department which is made up of 8% female and 92% male officers. When comparing this gender composition to sworn police officers nationally, the percentage of women in this sample is slightly higher at 17% when compared to cities with populations of 100,000 to 249,000, which is 11.9% (Federal Bureau of Investigations, 2013). The average years of service (YOS) at the time of completing CIT training for the entire sample was 6.9, with the average YOS being 4.25 for female officers and 7.38 for male officers, as shown in Table 1.

Table 1

#### *Descriptive Statistics for CIT Trained Officers*

Officer gender	Total	%	Avg. YOS
Female officers	5	17%	4.25
Male officers	25	83%	7.38

### Statistical Assumptions

There are four assumptions for the paired samples t-test: the observations of the dependent variables are independent, and the dependent variables are to be numeric and continuous, contain no outliers, and are normally distributed (Field, 2013; Statistics Solutions, 2018). The dependent variable in this study was the percentage of arrests and the percentage of diversions of all calls for service involving a mentally ill subject for each CIT trained officer. Each disposition is recorded in a single police report, making it independent of all other incidents. Each call for service involving a mentally ill subject

was documented for each officer, and the sum of these calls are entered as numerical data for each officer. There are no outliers in the dependent variables as data were collected from the same sample both pre- and post-CIT training. Finally, the dependent variables were normally distributed as seen in Figures 1 and 2. Therefore, all four assumptions were met for this paired samples t-test.

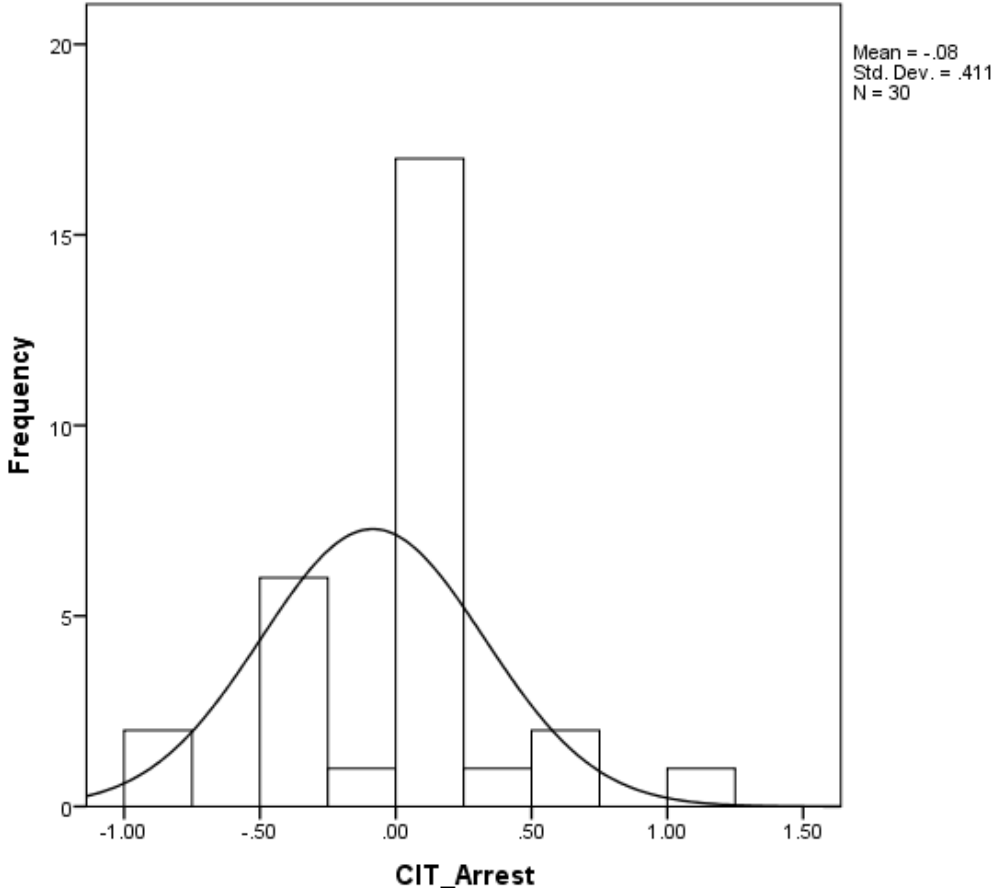
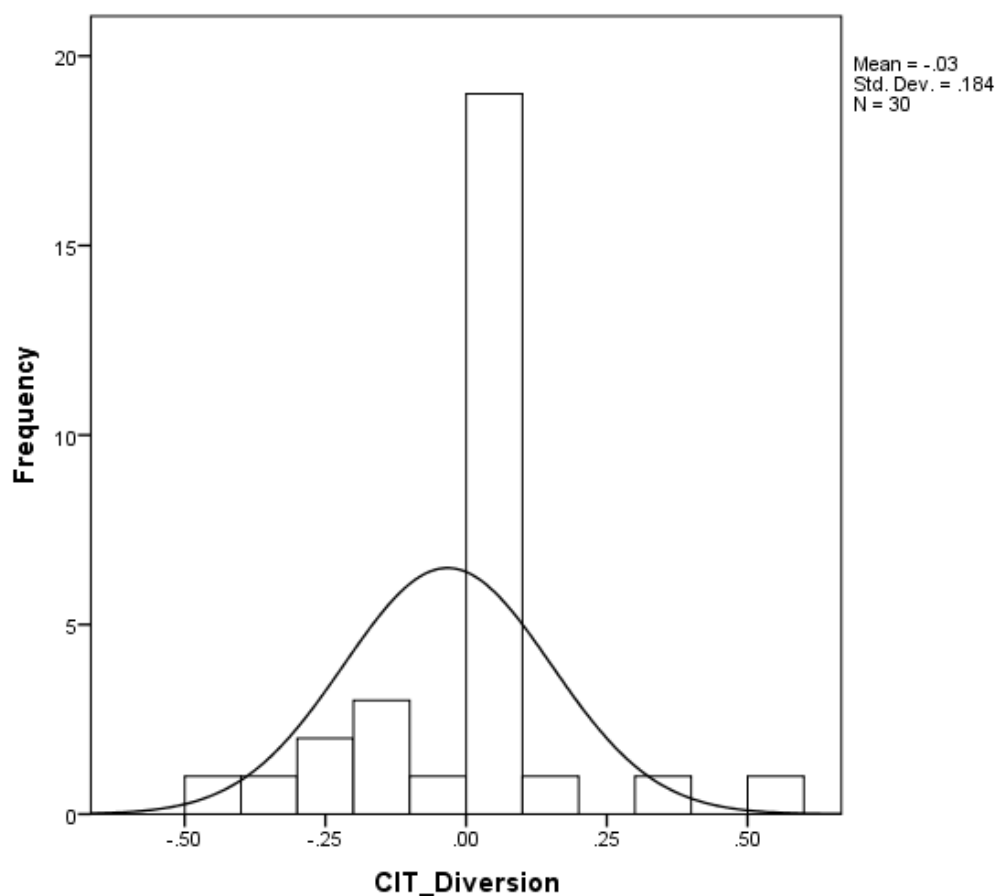


Figure 1. Arrests of mentally ill subjects.



*Figure 2.* Diversions of mentally ill subjects.

For the 6 months prior to CIT training, the officers in this study responded to 69 calls for service involving a mentally ill subject, resulting in 9 arrests (13%), 4 diversions (6%), and 56 calls where no code was entered (81%), as shown in Table 2. A breakdown of formal arrests and long form arrests pre-CIT training, as well how many mentally ill subjects in each arrest category received community resources, is displayed in Table 3. For all calls for service involving a mentally ill subject pre-CIT training, 54 (78%) resulted in the officer offering community resources to the subject, regardless of the disposition of the call. Of the 69 mentally ill subjects identified in pre-CIT encounters,

62% were male and 38% female, as shows in Table 4. The age range of subjects for pre-CIT calls was 11 to 80, with an average age of 36.

For the 6 months following CIT training, the officers in this study responded to 91 calls for service involving a mentally ill subject, resulting in 11 arrests (12%), 9 diversions (10%), and 71 calls where no code was entered (78%), as shown in Table 2. A breakdown of formal arrests and long form arrests post CIT training, as well how many mentally ill subjects in each arrest category received community resources, is displayed in Table 3. For all calls for service involving a mentally ill subject post CIT training, 77 (85%) resulted in the officer offering community resources to the subject, regardless of the disposition of the call. Of the 91 mentally ill subjects identified in post CIT encounters, 49 (54%) were male and 42 (46%) female, as shows in Table 4. The age range of subjects for pre-CIT calls was 14 to 84, with an average age of 34.

Table 2

*Descriptive statistics for mental health calls*

Calls for service group	Total	Arrests	Diversions	No-Codes	Resources Offered
Pre-CIT mental health calls	69	13%	6%	81%	78%
Post CIT mental health calls	91	12%	10%	78%	85%

Table 3

*Arrest types and resources*

CIT group	Formal arrest (FA)	FA provided with resources	Long form Arrest (LFA)	LFA provided with resources
Pre-CIT	67%	0%	33%	67%
Post CIT	64%	43%	36%	100%

Table 4

*Demographic statistics for mentally ill subjects*

CIT group	Total	Male	Female	Avg Age
Pre-CIT calls for service	69	62%	38%	36
Post CIT calls for service	91	54%	46%	34

**Results for Research Question 1**

Research Question 1: Is there a significant change in the rate of arrests for subjects with a mental illness made by CIT trained officers pre-and post-CIT training?

H<sub>0</sub>: There is not a significant change in the rate of arrests for subjects with a mental illness made by CIT trained officers pre-and post-CIT training.

H<sub>1</sub>: There is a significant change in the rate of arrests for subjects with a mental illness made by CIT trained officers pre-and post-CIT training.

A paired sample t-test was conducted to see if the mean difference of arrest rates between the pre- and post-CIT trained groups were statistically significant. Statistics for the paired samples for number of arrests is displayed in Table 5, and the paired samples correlations in Table 6. Results of the paired sample t-test showed that the mean difference of arrest rates of mentally ill subjects from six months pre- and six months post-CIT training [Mean difference = -.085, SD = .412, 95% CI (-.238, .069)] was not statistically significant at the .05 level of significance ( $t = -1.129$ ,  $df = 29$ ,  $p < .005$ ), as shown in Table 7. The alternative hypothesis which suggested that there was a significant difference in the arrest rates of subjects with a mental illness made by CIT trained officers pre- and post-CIT training is rejected.

Table 5

*Paired Samples Statistics for pre- and post-CIT arrests*

		M	N	SD	SEM
Pair 1	Pre-CIT arrests	0.1193	30	0.23722	0.04331
	Post CiT arrests	0.2040	30	0.34154	0.06236

Table 6

*Paired Samples Correlations for pre- and post-CIT arrests*

		N	Correlation	Sig.
Pair 1	Pre-CIT arrests & post CIT arrests	30	0.025	0.894

Table 7

*Paired samples t-test results*

		M	SD	SEM	t	p
Pair 1	Pre-CIT arrests - post CIT arrests	-0.08467	0.41087	0.07501	-1.129	0.268

**Results for Research Question 2**

Research Question 2: Is there a significant change in the rate of diversions for subjects with a mental illness made by CIT trained officer pre-and post-CIT training?

H<sub>0</sub>: There is not a significant change in the rate of diversions for subjects with a mental illness made by CIT trained officers pre-and post-CIT training.

H<sub>1</sub>: There is a significant change in the rate of diversions for subjects with a mental illness made by CIT trained officers pre-and post-CIT training.

A paired sample t-test was conducted to see if the mean difference of diversion rates between the pre- and post-CIT trained groups were statistically significant. Statistics for the paired samples for diversions displayed in Table 8, and the paired samples correlations in Table 9. Results of the paired sample t-test showed that the mean difference of diversions of mentally ill subjects from six months pre- and six months post-CIT training [Mean difference = -.033, SD = .2184, 95% CI (-1.018, .035)] was not statistically significant at the .05 level of significance ( $t = -.981$ ,  $df = 29$ ,  $p < .005$ ), as shown in Table 10. The alternative hypothesis which suggested that there was significant difference in the number of diversions of subjects with a mental illness made by CIT trained officers pre- and post-CIT training is rejected.

Table 8

*Paired Samples Statistics for pre- and post-CIT diversions*

		M	N	SD	SEM
Pair 2	Pre-CIT diversions	0.0390	30	0.11312	0.02065
	Post CIT diversions	0.0720	30	0.13525	0.02469

Table 9

*Paired Samples Correlations for pre- and post-CIT diversions*

		N	Correlation	Sig.
Pair 2	Pre-CIT Diversions & Post CIT Diversions	30	-0.094	0.621

Table 10

*Paired samples t-test results*

		M	SD	SEM	t	p
Pair 2	Pre-CIT diversions - post CIT diversions	-0.03300	0.18430	0.03365	-0.981	0.335

### Summary

In this chapter, I reviewed the details of the study, including a review of the research questions and their corresponding hypothesis. I discussed the data collection process, including any discrepancies in the process as outlined in chapter 3. I provided details of the data analysis for each research question and the results of the paired samples t-test that were conducted. The results of the analysis indicated that there is no significant difference in the arrest rates of CIT trained officers before and after the CIT training. Likewise, the results also indicated that there is no significant difference in the diversion rates of CIT trained officers before and after the CIT training.

In Chapter 5 contains the interpretation of the data analysis for this study and how it adds to the knowledge base for this topic as discussed in Chapter 2. The results were reviewed through the theoretical lens of the Evidence Based Policing, as outlined in Chapter 1. Limitations of the study and recommendations for future studies are also discussed in Chapter 5, as well as the impact that this study provides on positive social change.



## Chapter 5: Discussion, Conclusions, and Recommendations

### **Introduction**

The nature of this quantitative, quasi-experimental study was to measure the effects of CIT training on the number of arrests and diversions of mentally ill suspects who encounter police in a medium sized city in the Southwestern United States. In this chapter, I will review the number of arrests and diversions by CIT-trained police officers, comparing data from 6 months prior to completing CIT training to data from 6 months post-CIT training. The dependent variable for this study was the disposition of the police report, specifically whether an arrest was made, or the individual was aided in finding resources within the surrounding area. The independent variable was the 40-hour CIT training that all officers within the sample successfully completed. To determine if there were any statistically significant differences in rates of arrest and diversions for CIT-trained police officers before and after completing the training, a paired samples t-test was used. I used archival data to review the police reports written by officers who had completed CIT training. The results of the analysis showed that there was not a statistically significant difference in either the number of arrests or the number of diversions between pre- and post-CIT training.

### **Interpretation of the Findings**

As stated in Chapter 3, the definition of an arrest in this study was either a formal arrest, where the subject is taken into physical custody, or a long-form arrest, where the subject is released at the scene, while charges are forwarded by the officer to the town prosecutor for review. In each of these instances, the mentally ill subject is entered into

the judicial process. A diversion is defined as an officer utilizing a resource within the community to aid a mentally ill subject rather than initiating an arrest, even though probable cause for an arrest exists.

### **Research Question 1**

In looking at the results from the data analysis, the number of arrests pre-CIT ( $n = 9$ ) and post-CIT ( $n = 11$ ) showed no statistical difference between the two groups. These findings align with the results of a meta-analysis of research articles on the effects of CIT training which showed that CIT training had null effects on the arrests of mentally ill subjects (Taheri, 2016). Unlike this study in which I chose to examine the same group of CIT officers at two different points in time, the articles reviewed in the meta-analysis included samples comparing CIT-trained officers with non-CIT trained officers. The null effects of CIT training on arrests rates in this study may be due to the definitions of mental illness and diversion, which was also used in the meta-analysis (Taheri, 2016). Some of the studies in the meta-analysis included vague definitions for mental illness, while other articles relied on the officer or dispatcher categorizing the call for service as CIT-related (Taheri, 2016).

This study partially aligns with another systematic review that reported mixed results regarding the change in the arrests of mentally ill subjects following the implementation of CIT, with some agencies showing an increase in arrests; some, a decrease; and others, no change (Peterson & Densley, 2018). Only one study of the 25 research articles in the review indicated that CIT training had a statistically significant impact on the arrest rates of the population studied, although small to moderate effect

sizes in the study may have rendered the information meaningless (Peterson & Densley, 2018). One difference between this study and the one included in this second systematic review is the geographical location and community size. Articles from the systematic review were from large urban areas in the Southern and Midwestern United States, while this current study was conducted in a single city in the Southwest United States. I used archival data, as did the authors of 48% (n = 10) of the articles in the systematic review. However, the authors of these studies utilized a control group to compare against the CIT group (Peterson & Densley, 2018), which I did not.

Comparing the formal and long form arrest rates between the two groups also yielded no substantial differences to report, with 67% of pre-CIT arrests being formal compared to 64% of post-CIT arrests. Likewise, long form charges made up 33% of pre-CIT arrests and 36% of post-CIT arrests. One difference between pre-and post-CIT arrests were the instances of providing the mentally ill subject with community resources. Prior to CIT training, 22% of all mentally ill subjects arrested were also provided with resources. Of those arrested through long form, 67% were either offered community resources on scene or were directly transported to a facility for assistance, while none of those individuals taken into custody through a formal arrest were provided with resources. After CIT training, 64% of all mentally ill subjects arrested were provided with resources. Of those individuals long formed, 100% received services from officers and 43% of those formally arrested either received resources for follow-up upon their release, or they were directly transported to a hospital or mental health facility for services immediately following the booking process.

## Research Question 2

The data analysis for the number of diversions pre-CIT ( $n = 4$ ) and post-CIT ( $n = 9$ ) showed that the difference was not statistically significant. Studies comparing CIT-and non-CIT trained officers have shown that CIT trained police officers are more likely to refer or transport a mentally ill subject to a hospital or treatment center for assistance (Canada et al., 2012; Compton et al., 2014b; Peterson & Densley, 2018; Watson & Fulambarker, 2012). In this study, I did not compare the CIT-trained group with non-CIT-trained officers.

In one study whose authors gathered data from all 22 districts of the city of Chicago, CIT officers reported resolving 44.9% of all calls for service involving a mentally ill subject by transporting the individual to a hospital and 7.9% to another local mental health service (Watson & Wood, 2017). For this study, mental health calls prior to CIT training indicated that 61 (80%) of subjects received mental health assistance, with 30% of those being arrested. After CIT training, 81 (85%) of mentally ill subjects received mental health assistance, with 63% of those being arrested. Of the 141 (82%) subjects who received mental health services, 54% were directly transported to a facility that specialized in mental illness and 41% were transported to a hospital emergency room. So, while the results from this study show an increase in the number of referrals to mental health treatment, there was not a statistically significant change in the actual diversion rate. The current study was conducted in a municipality with approximately 240,000 citizens over a 1-year period, while the former study was conducted in a large metropolitan city of almost 3 million citizens over a 5-year period (Watson & Wood,

2017). Outcomes from the Peterson and Densley's (2018) meta-analysis indicated mixed results in regards the outcomes of mental health calls. A lack of comparison groups and follow-up data are two methodological issues that are shared by this study.

### **Theoretical-Contextual Framework**

EBP was the theoretical framework chosen for this study, as it is utilized by law enforcement agencies to assist in determining the effectiveness of programs or policies being implemented (Avdija, 2008). EBP is derived from evidence-based practice, which involves use of data to guide the decisions made in multiple disciplines (Avdija, 2008). EBP encompasses how the leadership in law enforcement agencies both develop and implement programs substantiated as effective through scientific testing (Avdija, 2008). Research in the law enforcement field uses EBP as a tool to find programs that can be utilized to reduce specific crimes or address other issues that arise in a call for service, such as the CIT program (Mazerolle & Martin, 2012). EBP is used to analyze the results of specialized programs, such as specialized patrol units, community-based programs, or CIT programs, and compare them with an experimental control, which would be the typical police protocol (Mazerolle & Martin, 2012). EBP has been instrumental in addressing the relationship of how police officers' treatment of individuals to the cooperation they receive on scene (Mazerolle & Martin, 2012). Mazerolle and Martin (2012) reported that when police treat suspects fairly and respectfully, suspects demonstrate a higher level of compliance and a satisfactory view of police.

With the current body of knowledge looking at the effectiveness of CIT showing mixed results, additional studies need to be done before CIT can be widely accepted as

EBP (Peterson & Densley, 2018). The results of the data analysis from this study do not support CIT being EBP regarding arrests and diversions. However, while EBP can be used as a measure to determine the implementation or continuation of a program when resources are limited, the number of resources available to CIT officers in this study allow the agency to make decisions about the CIT program without EBP being established.

### **Limitations of the Study**

One of the limitations of this study is the use of archival data in the form of police reports written by the sample of CIT officers. This study relied on the thoroughness and accuracy of the information contained within the police reports to be enough to determine the mental health status of the subjects involved (Schultz, Hoffman, Reiter-Palmon, 2005). Any information omitted from a report for any reason has the potential to impact the data collection process. This is a potential explanation for the large number of police reports in this study where no code was noted. While the documentation of an arrest, either formal or long form, is documented in the conclusion of the report, it is possible the coding of a diversion was missed due to details that were left out of a report. The large number of reports with no coding (81% pre-CIT and 78% post CIT) have limited this studies ability to determine statistical significance.

The first step in the data collection process after identifying the reports created by the CIT officers within the set time frame was to determine which ones involved a mentally ill subject as previously defined. Lack of knowledge and understanding of issues surrounding mental illness prior to completing CIT training, as well as a lack of

thoroughness in documenting comments or observations, may have caused key details to have been omitted from the report, thereby causing a subject with a mental illness to not be properly identified as such (Compton et al., 2014a; Ellis, 2014). Prior to CIT training, officers may not see issues such as a subject's hostility, various moods, not following given commands, or even signs typically associated with substance abuse having any connection to mental illness.

While maturation can be a limitation for time related studies such as this, keeping the range of data collected to six months pre- and post-CIT training helped to mitigate that issue. However, years of service of the CIT trained officer may be a limitation since a longer career as an officer increases the exposure to the stresses of working in a law enforcement environment, which is shown to influence job performance (Chen, 2009).

The definition of mental illness and diversion used in this study may themselves be a limitation to the generalizability of this study to the field of CIT. Calls for service regarding suicidal subjects created a challenge in properly coding the report as there often was not enough details provided to or by the officer to determine if the danger to self was situational or a result of an established mental illness. Such calls ranged from individuals making straightforward threats of wanting to harm themselves to those that making a comment or post on social media that caused someone to contact police to check on the individual. Each of these calls were reviewed to see if there were enough details to determine if the individual was dealing with a diagnosed mental illness, or if the individual may be under duress due to special circumstances. For this study, rather than count all reports where a subject stated that want to harm themselves as a mental illness

call, steps were taken to ensure that each reported counted involved an individual that was either self-identified or identified by a friend or family member as having a mental illness.

The definition of diversion for this study may also be a limitation to generalizability. Through reviewing articles and studies on the effectiveness of CIT, a number discuss CIT trained officers providing mental health assistance and resources to individuals more so than those officers that were not CIT trained (Canada et al., 2012; Compton et al., 2014b; Peterson & Densley, 2018; Taheri, 2016). While some studies may have viewed diverting a mentally ill subject from the criminal justice system by comparing arrests and resources provided, this researcher chose to only review instances where there was probable cause by the officer to make an arrest, yet the decision was made to utilize resources within the community to get help for the individual. Therefore, the diversion rate analyzed in this study does not reflect the actual mentally ill subjects that were provided with help and resources from CIT trained officers.

### **Recommendations**

There are some recommendations for future study in area of the effectiveness of CIT that have been realized by completing this study. First would be to study the arrest rates and diversion rates of two different groups of police officers, one CIT trained and one not CIT trained, rather than looking at the same group at two different time periods. Completing a study using two different groups would allow researchers to examine other variables and how they might connect to the arrest and diversion rates, such as age of the officer and years of service at the time of the study. In addition to using two groups,



future research could collect data from CIT officers at different intervals, such as 6 months, 12 months, and 24 months to see if there are any significant changes over time.

Another recommendation for future study may be widening the margins of data collection to possibly capture more individuals identified as mentally ill. One way to accomplish this would be to have the parameters of mental illness changed by the researcher to include individuals possibly under the influence of substances, or any call for service where a subject reports danger to self or others. Another way to accomplish this may be to have CIT officers track calls where they believe a mentally ill subject was involved, rather than having the researcher rely solely on the information contained in police reports.

This leads into another recommendation for future studies, which would be to utilize other sources other than archival data. Unless a way to mitigate the issue of incomplete documentation is developed for the study, the possibility of failing to capture necessary data points may be present, as evidenced in this study. In relying on archival data, the researcher is unable to control any aspect of how the data is collected and reported and is therefore at the mercy of the report taker for accuracy and thoroughness.

One area of the CIT program where additional study would be recommended is analyzing how many individuals with a mental illness received assistance in some form from a police officer, regardless of whether they were arrested formally or through long form. Although not analyzed for statistical significance, this study reported an increase in providing some form of mental health resources to individuals following CIT training. In

addition, future studies in this area may want to document which resources within the community are most often utilized by CIT officers.

Finally, this study was conducted using the entire police department from one city, and while other CIT studies have been completed within a single city or town, looking at the effects of CIT on arrest and diversion rates could be expanded for this study to neighboring cities. Most of the CIT officers (87%) in this study completed their training through the same CIT coalition, which combines the efforts of several cities in the immediate area. Choosing a sample of CIT officers from within other cities within this larger community would help to strengthen the outcome of data analysis.

### **Implications**

Looking at this study in relation to positive social change, it has added to the current body of work in CIT training and the outcomes that may be seen by law enforcement departments that have or are looking to implement the program. By failing to reject the null hypothesis, this study has corroborated findings of other studies in signifying that the arrest and diversion rates are not affected by CIT programs.

While the initial conception of CIT came from a need to reduce the use of force by officers towards mentally ill subjects, the program has shown that it goes beyond giving officers a set of skills they may not have had previously. This study can be added to the many previously published articles showing that CIT officers are informed about and connected to the resources within their community and are utilizing these to assist the mentally ill subjects that they meet that are in need. By police officers learning more about the agencies within their communities that they can utilize on duty, they are

continuing to strengthen the working relationship between law enforcement and the mental health community. This in turn may not only help to identify new areas of need within the community, but also to help create new working relationships between law enforcement and the community.

As research in the effectiveness of CIT training continues, looking at issues such as arrest and diversion as this study did, or other areas such as use of force, officer and subject safety, and issues regarding program implementation, the answer to whether the CIT program is evidence based will become clearer. If research does dictate that CIT is not EBP, adjustments to the program may need to be considered on a local, national, and international level to deal with the individual needs of each community. The arena of policing, as well as knowledge, attitudes, and perceptions, have changed throughout the country since the development of the CIT program 30 years ago. So as new challenges for law enforcement and mentally ill subjects rises, research in the effectiveness of the CIT program must continue to ensure that it remains a valid tool to affect policy in law enforcement.

### **Conclusion**

The CIT program was born out of violent and sometimes deadly encounters between police officers and mentally ill subjects encountered within their community (Sharp, 2013; Usher, 2013). The 40-hour CIT training program was designed to provide officers with the skills to not only recognize and better understand mental illness and those that live with it, but to provide officers with tools necessary for de-escalating a potentially dangerous situation, connect with community resources in order to better

assist mentally ill citizens, and to prevent the unnecessary arrest and introduction into the criminal justice system of mentally ill subjects (Blevins et al., 2014; Canada et al., 2012; Watson & Fulambarker, 2012). With many of the studies on CIT looked at the attitudes of police officers towards the mentally ill, use of force in interactions between police and the mentally ill, and implementing and maintaining CIT programs in differing communities, this study looked specifically at the effect of CIT training on arrest and diversion rates of all CIT trained officers within a single police department. The results of this study did not indicate a significant connection between CIT training and a lowered arrest rate or an increased diversion rate, which added to the mixed results of other research looking at these variables in other locations. This study also adds to the understanding that additional research in the field of CIT is warranted, as encounters between police and mentally ill subjects is something that will not change. As the philosophies of law enforcement continue to evolve over time, it is important that the intersection of police and the mentally ill citizens they serve is guided by continued research to ensure positive outcomes for all parties.

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