Measuring the Effectiveness of Crisis Intervention Team (CIT) Training in Law Enforcement: An Urban Analysis of the Broward Sheriff's Office

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Approval Page

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Abstract

The purpose of the present study was to identify Broward Sheriff's Office (BSO) deputies' frequency of opting to Baker Act individuals suffering a mental health crisis versus making a physical arrest. A retrospective cohort design analysis was conducted examining six years of BSO's calls for service related to law enforcement officers' responses and actions taken while dealing with an individual suffering a mental health crisis between 2017 and 2023. A designated officer with authorized security clearance compiled an anonymized dataset for analysis from a cross-section of internal BSO databases. The deputies' gender, race, ethnicity, age, years of service, crisis intervention team (CIT) certification date, and the type of call for service (mentally ill person or suicide) were incorporated into the study to assess if any patterns exist within a particular segment of the participant population. Implications of the findings will be discussed. The results revealed no significant effect of CIT training on the decision to arrest after controlling for officer age and years of service. However, among officers who had made at least one arrest, those who were CIT trained at the time of the incident were significantly less likely to make an arrest than those who had not been trained. Age, gender, and ethnicity indicated no significant moderation effect on officers' performance.

Keywords: crisis intervention training, people with mental illness, law enforcement officer, Baker Act, substance abuse, arrest, diversion, alternative treatment plans, computer-aided dispatch (CAD), records management system (RMS), calls for service (CFS)

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Chapter 1: Introduction

Statement of the Problem

      The problem to be addressed in this study is the lack of research-based data on the effectiveness of crisis intervention team (CIT) training for law enforcement officers and the impact of such training regarding de-escalation techniques, the use of force, and the redirection of mentally ill individuals into mental health care facilities versus jails or prisons. In the mid-1950s, a new term and practice were established by the government that yielded severe unintended consequences for those who suffer from mental illness. The term, "deinstitutionalization," refers to the policy of removing severely mentally ill individuals from state-run mental health care facilities and transitioning them into community-based care (Scallet, 1989). Although one goal of deinstitutionalization was to reduce the burden from state and federal systems, it unintentionally created problems for local governments in terms of managing the mental health needs of their communities (Segal, 1979). Further, the period of deinstitutionalization generated a rapid closure of state psychiatric hospitals, thus greatly reducing bed space and housing capabilities. Without any significant data suggesting this path forward would have a long-term societal benefit, a national policy implication occurred under what was effectively a social experiment. In other words, the new national policy shift was enacted without consideration of the long-term impact of the decision.

      The magnitude of deinstitutionalization of severely mentally ill patients represents one of the largest social experiments in American history. In 1955, there were 558,239 severely mentally ill patients in the nation's public psychiatric hospitals. By 1994, this number had been reduced to 71,619. It is important to note, however, that the census of 558,239 patients in public psychiatric hospitals in 1955 was in relation to the nation's total population at the time, which

was 164 million (Torrey, 1998). By 1994, the nation's population had increased to 260 million. If there had been the same proportion of patients per head of population in public mental hospitals in 1994 as there had been in 1955, patient numbers would have totaled 885,010. The true magnitude of deinstitutionalization, then, is the difference between 885,010 and 71,619. In effect, approximately 92% of the people who would have been living in public psychiatric hospitals in 1955 were not residing there in 1994. Even when allowing for the approximately 40,000 patients who occupied psychiatric beds in general hospitals, or the nearly 10,000 patients who occupied psychiatric beds in community mental health centers (CMHCs) on any given day in 1994, that still means that approximately 763,391 severely mentally ill people (over three-quarters of a million) are living in the community today who would have been hospitalized 40 years ago (Torrey, 1998). That number exceeds the population of Baltimore or San Francisco.

Considering this drastic change in the landscape of psychiatric care since the implementation of deinstitutionalization, a few immediate questions warrant consideration: How are these mentally ill individuals being cared for? What resources are being used to mitigate this damaging social issue? Further, who has absorbed the responsibility to care for these individuals out on the streets? The short (and incomplete) answer is local police departments and sheriff's offices. Local law enforcement officials have now become the de facto mental illness experts and gatekeepers for those suffering from severe mental health problems. Unfortunately, from 1955 to 1988, local law enforcement was unequipped, untrained, and, ultimately, unprepared to deal with so many mental illnesses and associated behaviors. According to Teller et al. (2006), in the absence of specialized training in mental illness and knowledge about local treatment systems, mental health crises may end in arrest and incarceration when referral and treatment would be

more appropriate. This was precisely the issue and practice for 33 years until the development of CIT training for law enforcement officers.

CIT was launched in Memphis, Tennessee, in 1988 following the fatal police shooting of 27-year-old Joseph Dewayne Robinson, who had been previously diagnosed with paranoid schizophrenia. On September 27th, 1987, Mr. Robinson's mother called the police seeking assistance as her son was exhibiting signs of instability. Mr. Robinson was reportedly cutting himself and under the influence of several narcotics (Rogers et al., n.d.). Upon arrival at the scene, police officers made several verbal requests to Mr. Robinson. Unfortunately, Mr. Robinson failed to comply and lunged toward officers, at which time he was shot and killed. In response to the community outcry for a change in the way law enforcement responded to the seriously mentally ill, CIT emerged as a collaborative partnership between the City of Memphis Police Department and Memphis University to reduce the lethality of means used with persons with mental illness (PwMI) and to divert when appropriate. Two core principles were articulated within the training curriculum: (a) recognizing the signs and symptoms of mental illness and (b) possible verbal de-escalation strategies to employ in crisis situations involving the seriously mentally ill. According to Rogers et al. (2019), the 40-hour CIT curriculum developed for this purpose included three components: (a) a specialized police response (officers receive special training to interact with the seriously mentally ill), (b) a police-based specialized mental health response (non-sworn members with mental health training provide training for onsite mental health practitioners), and (c) a specialized mental health response (police officers co-ordinate with independent mental health systems to collaborate on emergency-filed responses).

This initiative was particularly important for law enforcement as they are often called to resolve calls for service related to mental illness. Moreover, a dire need for enhanced training has

become vital for the reduction of inmate populations across the country. According to Torrey (1998), approximately 20% of inmates in jails and 15% of inmates in state prisons have a serious mental illness. Based on the total number of inmates, this means that there are approximately 356,000 inmates with serious mental illness in jails and state prisons in the US. This high volume of mentally ill inmates creates an enormous financial burden on communities. Moreover, it reflects a serious disconnect in creating ethical and moral practices within the criminal justice system.

Background and Significance

The problem of mental illness in our population has evolved into a policing matter rather than one of clinical and medical orientation that requires expert mental health care. The law enforcement community has embraced CIT training to reduce the unnecessary use of force, mitigate the growing jail population, and guide individuals to appropriate mental health care. For decades, researchers have conducted a multitude of studies examining the impact of CIT. Unfortunately, the results are just as varied as the nature of assessment (Browning et al., 2011). Evaluations of the effectiveness of CIT training and its intended goals for implementation have been characterized by a lack of uniformity across the law enforcement community.

Some researchers have worked with law enforcement agencies to examine the number of calls for service that fall under mental illness that would be better redirected toward social services. Teller et al. (2006), for example, attempted to determine whether CIT-trained officers were more likely than non-CIT-trained officers to respond to calls involving individuals with a mental illness who were experiencing a crisis and to transport the person to a health care facility, and less likely to either arrest the person or leave the person at the scene. The results indicated a

marginal increase in the arrest frequency of mentally ill individuals. Yet, at the same time, the findings revealed enhanced recognition of mental illness by CIT-trained officers.

Klimley et al. (2021) examined the interaction between police officers and mentally ill persons in two South Florida municipal police departments to ascertain what individual and departmental factors influence a police officer's decision to initiate an involuntary psychiatric admission (i.e., Baker Act). The results showed differential rates of Baker Acts between the two departments over a three-year period. It was noted that the department with a higher incident rate of Baker Acts incrementally increased the number of CIT-trained officers each year (24 vs. 4). In addition, this department reported a higher frequency of individuals with known mental health conditions and elevated rates of substance-use-related Baker Acts.

Regardless of the type of research conducted examining the impact of CIT training on police officers' performance, the fact remains the same: measuring and capturing a true sense of CIT benefit becomes a significant issue with policing and the mental health care industry. This is particularly true in the State of Florida. According to the Florida Baker Act Reporting Center, of the 205,781 Baker Acts initiated from 2017 to 2018 in the state, 51.67% were initiated by police officers (Klimley et al., 2021). These are significant figures and illustrate two core observations. First, police officers are having a significant impact on mentally ill individuals; however, police agencies are under-resourced to effectively handle the problem. Police departments across the country continue to receive calls for service related to the seriously mentally ill despite the fact that many of those calls for service are better handled by social services. Second, police interactions are critical in ascertaining the outcomes and care for this neglected community. The ability to empirically assess the benefits of CIT-trained police officers can have significant

implications for law enforcement agencies' budgets, policies, training agendas, and use-of-force practices.

Barriers and Issues

This study attempts to evaluate CIT's impact on community policing. Further, it does so in a manner that examines three core areas: (a) reduced arrest by medical evaluation and referral treatment, (b) increased Baker Acts by CIT-trained police officers, and (c) the role of the law enforcement officer's gender in determining the outcome—Baker Act or arrest. Each of these core areas can be isolated and evaluated independently of each other; however, this study attempts to take the totality of circumstances involving CIT-trained law enforcement encounters and examine the effectiveness of the program. This approach allow policymakers and law enforcement administrators to make decisions based on best practices when it comes to implementation and investment in CIT programs. However, limitations exist in being able to determine which segment of CIT training has the greatest value for police officers. CIT training is currently 40 hours in length. Thirty hours include presentations on topics such as mental health basics, signs, and symptoms of specific disorders, hearing voices, trauma-informed care, and de-escalation communications techniques (McNeeley & Donley, 2020, p. 197). The remaining 10 hours include scenario-based training via role-played interactions. The goal is to replicate real-world encounters with mentally ill individuals in order for participants to practice their active listening and de-escalation skills.

Definition of Terms

A *police officer* is defined as any person who, upon completing all training prescribed by the State of Florida, is given statutory authority to enforce the law. The definition includes municipal officers, deputy sheriffs, state troopers, and state agents, but excludes correctional officers.

The term crisis intervention team (CIT) training applies to individuals who have successfully completed an authorized National Alliance of Mental Illness (NAMI) 40-hour community-based program that integrates law enforcement, mental health professionals, mental health advocates (people living with mental illness and their families), and other partners to improve community responses to mental health crises (Usher et al., 2019).

A *person with mental illness* (PwMI) refers to an individual with a serious mental illness that affects thinking, emotions, and behaviors. For these people, their brains have changed in a way in which they are unable to think, feel, or act in ways they want to. For some, this means experiencing extreme and unexpected changes in mood, such as feeling more sad or worried than normal. For others, it refers to not being able to think clearly, not being able to communicate with someone who is talking to them, or having bizarre thoughts to help explain the strange feelings they are having.

Purpose of the Study

The purpose of this study was to conduct a comprehensive assessment of the effectiveness of CIT training for law enforcement professionals. Specifically, the study examined whether CIT-trained officers are more likely than non-CIT-trained officers to Baker Act individuals experiencing mental health crises and less likely to make an arrest. Another purpose was to determine if their receiving CIT training leads to redirecting the seriously mentally ill to

appropriate mental health care or treatment facilities (Baker Acts). Finally, this study examined

how individual characteristics of police officers (e.g., age, gender, tenure) influence rates of

Baker Acts versus arrest of individuals with mental illness. A comprehensive assessment of CIT

impact affords law enforcement administrators and policymakers an opportunity to re-evaluate

annual budget needs, operational expenditures, policy reforms, and community programs. It is

anticipated that the results will help to inform the potential future needs for continued education

in CIT training for law enforcement officers.

Chapter 2: Literature Review and Research Questions

In the mid-1950s, a new term and practice were established by the government that yielded severe unintended consequences for those who suffered from mental illness. Deinstitutionalization was the policy of removing severely mentally ill individuals from state-run inpatient mental health care facilities in exchange for outpatient community mental health centers. Such deinstitutionalization generated a rapid closure of state psychiatric facilities, thus reducing access to significant bed space and housing.

Without data suggesting this path forward would have a long-term societal benefit, a national policy implication occurred that was effectively a social experiment. Indeed, the magnitude of deinstitutionalization of the severely mentally ill qualifies as one of the largest social experiments in American history. In 1955, there were 558,239 severely mentally ill patients in the nation's public psychiatric hospitals. By 1994, this number had been reduced to 71,619. It is important to note, however, that the census of 558,239 patients in public psychiatric hospitals in 1955 was in relation to the nation's total population at the time, which was 164 million (Torrey, 1998).

By 1994, the nation's population had increased to 260 million. If there had been the same proportion of patients in the population housed in public psychiatric hospitals in 1994 as there had been in 1955, the patients would have totaled over 885,000. The true magnitude of deinstitutionalization, then, is the difference between 885,010 and 71,619. In effect, approximately 92% of the people who would have been living in public psychiatric hospitals in 1955 were not living there in 1994. Even allowing for the approximately 40,000 patients who occupied psychiatric beds in general hospitals, or the approximately 10,000 patients who occupied psychiatric beds in community mental health centers on any given day in 1994, that

still means that approximately 763,391 severely mentally ill people are living in the community today who would have been hospitalized 40 years ago. That number exceeds the population of Baltimore or San Francisco (Torrey, 1998).

Over the last 30 years, law enforcement agencies across the US have been struggling to implement the best mental health training modality for police officers to reduce the unnecessary arrest of people with a serious mental illness. One model of training that has become nationally recognized as the best practice in this regard is CIT training, also known as the Memphis Model. A historical account of CIT began in response to an incident that occurred in Memphis, Tennessee. Police encountered 27-year-old Joseph Dewayne Robinson in the street outside his mother's house as they responded to a 911 emergency dispatch called in by Mr. Robinson's mother on September 24, 1987. Mr. Robinson reportedly had an extensive history of mental illness and substance abuse. When police officers arrived on scene, they encountered Mr. Robinson engaging in erratic behavior. Mr. Robinson charged toward the officers, at which time the officers shot and killed him. A community outcry resulted in stakeholders from the criminal justice system, community activists, and the National Alliance of Mental Illness (NAMI) creating the CIT program.

According to the World Health Organization (2022), approximately 1 in 8 people worldwide experience mental illness; however, it remains a highly stigmatized condition. The stigma surrounding mental illness manifests in various ways, including perpetuating misconceptions, fear, and prejudice. This manifestation leads to the marginalization and exclusion of individuals with mental health conditions from society. Moreover, those suffering from mental health issues become hesitant to seek treatment due to shame or embarrassment. This stigma can be seen in societal attitudes, institutional practices, and even within criminal

justice systems, where individuals may be met with skepticism, judgment, or inadequate support when seeking services (Hiday & Burns, 2009). Law enforcement officers who are untrained in mental health crisis intervention techniques may be subject to the type of stigmatization related to mental illness that could lead to officers failing to identify the signs and symptoms of an individual in crisis.

In the United States, the issue is exacerbated when it comes to the volume of mental health calls for service that law enforcement officers are receiving. According to Puntis and colleagues (2018), US law enforcement is facing an unprecedented increase in their response to incidents involving someone with a mental health problem, surpassing any previous period in the history of policing. It is estimated that between 7% and 31% of police calls involve individuals with mental illness (Shapiro et al., 2014). When reviewing data from the nation's largest metropolitan police department, the New York City Police, more than 20% of their calls for service are related to a mental illness crisis (Abramson, 2021; Watson et al., 2008). These figures are very similar to those collected by the Broward County Sheriff's Office (BSO).

According to the BSO's Communication Center, countywide (17 municipal police departments and 16 sheriff's jurisdictions) law enforcement officers responded to 1,051,141 law enforcement calls for service in 2023. Of those calls for service, 1.6% accounted for mental illness calls for service (note: these are only calls reported via 911 or non-emergency; they do not include self-initiated calls captured by deputies in the field). Therefore, Broward County law enforcement officers responded to 16,340 mental illness-related calls for service where an individual was reported to be suffering a mental health crisis. Of the total 16,340 mental illness calls reported, municipal police departments responded to 9,466 of those calls for service, which

accounted for 57.9% of the total mental health crisis calls reported. BSO responded to the remaining 6,874 mental health calls for service, which accounts for 42% (BSO, 2023).

The data points discussed above may appear alarmingly unique as they relate to law enforcement officials dealing with the mental illness crisis; however, the statistics highlight a snapshot of a much larger crisis occurring across the United States. According to the National Institute of Mental Health (2021), it is estimated that more than one in five US adults live with mental illness (57.8 million). The term mental illness includes a multitude of varying diagnoses and definitions; regardless of how the problem is identified, a lack of training, resources, dedicated critical infrastructure, and funding continues to have a negative impact on society and the police, who are often the first responder arriving on scene to assist those in need. Based on the statistics provided, it can be assumed the negative impact that mental illness is having on society will continue to expand, prompting the importance of further research in the area of mental health treatment protocols. CIT training for law enforcement and community stakeholders is just one tool that may help mitigate this societal issue.

The section below provides a systematic review of the use and effectiveness of CIT for police officers as it relates to the reduction of unnecessary arrests of people with a serious mental illness. Specifically, the impact of CIT training on police officers' perceived threat and the diversion of mentally ill individuals to appropriate mental health care facilities versus jail will be examined. In addition, the nature of police officers' continuing education in CIT and efforts relevant to the expansion and frequency of training are reviewed.

Memphis Model

As society continues to grapple with the issue of mental illness, police officers continue to utilize the skill sets provided by the CIT training curriculum. CIT is composed of 40 hours of course material. The goals of the program are to provide an immediate response to managing situations involving a person with a serious mental illness in order to prevent injury to the citizen and/or officer and to find appropriate care for the seriously mentally ill individual (Klein, 2010). The CIT model focuses on three basic core elements: (a) ongoing, (b) operational, and (c) sustaining elements. When examining these core elements further, we can classify the following under the <u>ongoing elements</u>: partnerships (law enforcement, advocacy, and mental health), community ownership (planning, implementation, and networking), and policies and procedures. <u>Operational elements</u> include police officers, dispatchers, and coordinators; curriculum; mental health receiving facilities; and emergency services. <u>Sustaining elements</u> include evaluation and research, in-service training, and continued outreach (Dempsey, 2016). The combination of these elements provides communities with a comprehensive plan for the long-term sustainment of the CIT program.

One of the more critical areas of study in CIT research is law enforcement officers' perceptions of the seriously mentally ill and how they impact their field evaluation of danger/threats. The police subculture is rich in the conceptual aspect of crime fighting, which often exacerbates conflict between officers and the people they serve. Police values are shaped in an environment of danger, stress, boredom, and violence. Enhanced knowledge of the unique challenges inherent in law enforcement is imperative for counselors to communicate with officers more effectively during CIT training. CIT was developed to train police officers to more effectively and compassionately respond to the needs of persons experiencing psychiatric

distress (Chopko, 2011). Accordingly, law enforcement officers who participate in CIT training must develop a shift in mindset to serve as "compassionate warriors." Law enforcement officers historically undergo basic academy training mirroring that of the military. A highly vigorous and warrior mindset is developed during the academy process. A softer and much more compassionate approach to policing is required from police officers, especially when they are in contact with someone suffering a mental health crisis. Chopko (2011) explored the relationship between the compassionate warrior approach and CIT training. The results showed that CIT-trained officers were typically more receptive to mental illness as a brain disorder rather than misconduct, leading to reduced stereotyping and stigmatization. Police officers are trained from day one that their personal safety is paramount above all else during any call for service, causing police officers to project a profile of warrior versus guardian/servant.

In a deeper effort to connect spiritually and compassionately with the CIT training provided to police officers, Chopko (2011) implemented the mindset of historical warriors, such as samurai, kung fu monks, medieval knights, native American Indians, the US military, and the principles of legendary martial artist Bruce Lee. For example, Chopko (2011) referenced the samurai Bushido code's premise of the tenderness of a warrior—"had a sound that appealed at once to whatever was noble in us; not that the mercy of a samurai was generically different from the mercy of any other being, but because it implied mercy where mercy was not a blind impulse, but where it recognized due regard to justice, and where mercy did not remain merely a certain state of mind, but where it was backed with power to save and kill." The concept is romantic in nature but perhaps allows modern police officers to accept CIT training as an act of nobility.

Moreover, the promotion of the compassionate warrior mindset may not only benefit the community that the police serve (including people with mental illness) and enhance officers' physical safety; it may also increase the wellbeing of the officers through spiritual development. Many officers suffer physical and psychiatric distress resulting from traumatic and nontraumatic stressors inherent in police work (Chopko, 2011). Chopko's assessment brought forth a sense of CIT expansion by changing police subculture and integrating mindfulness and spirituality within officers' decision-making.

The adoption of CIT training programs within police departments continues to increase. According to the National Alliance of Mental Illness (NAMI), over 2,700 communities across the US are engaged in this training. The national expansion of CIT is beneficial for those communities who are interested in diverting persons with mental illness away from arrest. This expansion has led to the creation of varying models of CIT programs. From a more global perspective, researchers have determined that police departments may utilize one of three popular alternative response models. First, CIT consists of officers trained to identify signs and symptoms in mentally ill individuals and provide them with access to needed services. Second, the mobile crisis team (MCT) involves collaboration between officers and behavioral health experts to decide what course of action should be taken to assist persons experiencing a mental health crisis. Third, the community service officer (CSO) model utilizes candidates with prior social work experience who have completed a six-week police training program (Martínez, 2010). Each of these deployable styles of CIT is driven by the individual police department and community needs. Martinez (2010) examined each specialized model of police response and discussed whether traditional approaches are sufficient for providing officers with the tools they

need to assist persons with severe mental illness. A few observations were made that illustrated the benefits or shortcomings of the three programs mentioned above.

The MCT model is employed by a handful of departments across the country. In this model, police officers are supported by behavioral health experts who are dispatched to a scene involving a person with mental illness. Officers are trained on a model similar to CIT except they are no longer required to make clinical decisions on their own (Martínez, 2010). This model alleviates police officers from having to independently make decisions based on clinical observations. Instead, the better-qualified medical practitioners deployed make the final decision regarding care and disposition. Another variation of the MCT model—the emergency response team (ERT)—is deployed by the San Diego Police Department, where police officers undergo 80 hours of mental health response training. In this system, police officers and mental health professionals respond to incidents together. Here, they share responsibility for determining the appropriate course of action.

Under the CSO model, candidates with prior social work experience complete six weeks of police training. CSOs assist police officers on the scene with mental-health-related calls. This model is similar to MCT in that it provides officers with assistance from mental health professionals; however, the CSO is a police department employee (Martínez, 2010). This reduces the number of sworn law enforcement officers required by supplementing calls for service related to mental illness with quasi-mental-health practitioners. The final observation was conducted on the standardized CIT program most frequently implemented by police departments across the country. Police officers voluntarily participate in the 40-hour training covering a range of psychological problems and psychiatric disorders. A key component of this program is establishing partnerships with mental health facilities that will admit every person who is

brought in by a police officer for evaluation (Martínez, 2010). The MCT study clearly articulates the benefits of CIT and its evolutionary processes that have organically occurred across the US.

Browning et al. (2011) analyzed the performance, success, and need for future progressions of CIT training along with community participation. In this review, CIT was examined by focusing on research concerning the three primary types of specialized response that have been adopted by police departments participating in mental health programming: (a) mental-health-based responses, (b) police-based specialized mental health responses, and (c) police-based responses.

Each of the responses contains its own unique elements or characteristics. In the first response model, mental health emergency calls are diverted from police to a mental health crisis facility or agency, such as an on-call mobile crisis unit. These units handle the emergency without police involvement, if possible, and direct the individual to the appropriate resource. The police-based mental health response model also uses non-sworn mental health personnel; however, they are employed by the police agency and respond to mental health crises instead of sworn officers. In the police-based model, officers are specially trained to handle mental health crises and respond to police callouts to ensure that the individual receives proper care and treatment when possible. This model, referred to as the crisis intervention team (CIT), has been the focus of increased investigative attention and garnered considerable empirical support in recent years (Browning et al., 2011).

Of research focus were the two responses directly associated with police officers' integration or intervention. Researchers viewed police departments across the country along with studies conducted on the performance of CIT. A range of areas was highlighted showing successful outcomes or contributions of CIT. Specifically, there was a decrease in SWAT

callouts, officer injury rates, length of time on mental health crisis calls, and arrest rates of individuals with mental illness (Browning et al., 2011). Further, a review of previous studies indicated that the use of force by CIT officers was positively correlated with violence potential (e.g., making threats, being intoxicated, access to a weapon) of such individuals in crisis. However, officers used force in only 15% of 189 high-risk cases (Browning et al., 2011). A highly positive view of this literature brings merit to the continuation of CIT training or advancements. Despite the positive assertions, there were limitations associated with the paucity of CIT studies, an over-reliance on anecdotal and/or descriptive evidence, and difficulties in replication.

CIT research has been limited in terms of its benefits across all areas of the criminal justice system. For example, how do CIT-trained correctional officers deploy their skills while engaged with inmates who are in their care, custody, and control? It is estimated that 300,000 men and women with mental illness may be housed in jail or prison in the US. Consequently, it is highly probable that correctional officers frequently encounter incidents of inmates experiencing episodes and symptoms of serious mental illness. This question was examined by McNeeley and Donley (2020) in an attempt to measure the impact of the Minnesota Department of Corrections. Their results showed that, in the correctional system, the use of CIT techniques was positively associated with mental health referrals (McNeeley & Donley, 2020). However, the study did not yield any definitive outcomes related to correctional officers' use of force.

CIT Training for Youth Diversion (CIT-Y)

The growing interest in CIT training within the law enforcement profession has led researchers to evaluate its impact on police officers' encounters with youth. In 2008, approximately two million young people under the age of 18 were arrested in the US

(Puzzanchera, 2009). In addition, it is estimated that 20% of youths involved in the criminal/legal system have a mental health problem (Cocozza & Skowyra, 2000). This is approximately double the rate found in the general population of this age group (Kubiak et al., 2019) and is a significant concern for law enforcement and members of the community. Police officers spend a considerable amount of time interacting with youth in their communities. Kubiak et al. (2019) examined police officers from two different participating counties who received an eight-hour CIT-Y training program that placed greater emphasis on managing youth. The National Center for Mental Health and Juvenile Justice version of CIT-Y is conceptualized as an eight-hour advanced training module of the adult version of CIT training (Kubiak et al., 2019). The results of this project revealed positive perceptions from participating police officers who were already CIT-trained under the traditional 40-hour program. However, the program was of a short (eight-hour) duration and did not include role-play or scenario-based exercises, which are hallmarks of traditional CIT training.

Crisis Outreach and Support Team (COAST)

In 2005, the Albuquerque Police Department (APD) introduced the crisis outreach and support team (COAST). COAST was designed as an expansion of the basic scope of a sworn CIT program and involved civilians acting as crisis outreach personnel. The five "crisis specialists" who comprised the civilian unit were employees of APD and supervised by a police sergeant (Rosenbaum, 2010). The members of COAST were college graduates with experience in case management and social work. The idea behind integrating more professional civilians in mental health law enforcement calls for service was to create a co-responder team model. These co-responder teams created a more cost-effective process for managing persons with mental illness. Further, a unique aspect of the team was the inclusion of a licensed psychiatrist. The role

of the psychiatrist on the COAST team was legal, diagnostic, enhanced credibility, treatment, teaching, consulting, medical evaluation, and intervention (Rosenbaum, 2010). This expanded and customized version of CIT enhanced field decision capabilities involving mentally ill persons. Psychiatrists were able to execute pick-up orders, assist adult protective services, properly diagnose individuals, prescribe medication, and support many other medical practices within the scope of the law. COAST is one of the more robust programs that emerged from CIT and has implications for national programming models.

Another illustration of the range of mental health training models utilized by police departments is provided by Morgan and Miles-Johnson (2022). In their study, the Australian State Police Organization's mental health response training (MHRT) program was evaluated by interviewing police recruits and gauging their willingness to ensure procedural justice was afforded to persons with mental illness. Specifically, this study evaluated the efficacy of police mental health training and whether it prepares police recruits to effectively respond to persons with mental illness during times of crisis. Further, it analyzed whether police recruits were trained to use policing practices and processes considered fair and just. Although the MHRT program is not considered a CIT course per se, many similarities exist in the nature of the course material. For example, MHRT police recruits typically receive between 24 and 33 weeks of theory and scenario-based training regarding acceptable and professional police practices with only minimum law enforcement experience. This is a significant and rarely seen dedication to mental health training at the police academy level. At the conclusion of the training, a survey is administered to the new police officers to evaluate their perception of the importance of MHRT and its impact on their ability to effectively use sound discretion. The study's results were mixed, but favorable overall concerning the positive impact of MHRT before being deployed into the

field as sworn officers. This study underscored the improvement that can be made in the areas of increased training, practical scenarios, the incorporation of more role players, including mentally ill individuals in classroom discussions, and continued education.

Effectiveness of CIT

Measuring the impact of any program is essential for modification and growth. Compton et al. (2017) attempted to ascertain which officers most effectively implemented CIT diversionary efforts: those who volunteered for the program or those who were directly assigned. According to these investigators, officers volunteering for CIT training is assumed to be an important, beneficial self-selection bias. Compton et al. (2017) examined: (a) a multitude of previous CIT studies/reports that generated results related to police officer performance and (b) the characteristics of those officers who participated in these investigations. The results showed that the police officers demonstrating great proficiency in the application of CIT strategies were those who had volunteered for CIT training, had more formal education, had previous experience in mental health, and were female. Further, CIT officers who volunteered had consistently better scores on measures of attitudes toward mental illnesses and their treatments, self-efficacy for interacting with persons with serious mental illnesses, stigma, de-escalation skills, and referral decisions (Compton et al., 2017).

Compton et al. (2015) also assessed the established support network for CIT training among law enforcement administrators (i.e., chiefs of police and elected sheriffs). Up to that point, no such evaluation had been conducted. In this project, the study team partnered with the Georgia Sheriffs' Association and Georgia Association of Chiefs of Police to e-mail a survey link (and a reminder one week later) to 159 Georgia sheriffs and 587 police chiefs. The survey questions focused on community socio-demographics, agency size, CIT implementation

strategies, and the number of participating police officers in the program. A total of 204 responses were received (27% response rate). The survey data revealed that law enforcement administrators who were participating in CIT marginally varied in organizational differences regarding support for CIT training. A core limitation of the study was the lack of diversity among respondents. Typically, law enforcement administrators are older white males whose perspectives bring more commonality to an issue. This could be problematic when we consider that more women participate in CIT training than men.

Demir et al. (2009) measured the change in police officers' stigmatization and perspectives of those suffering from schizophrenia. An association between beliefs about causation and attitudes among officers was expected. Such a contention was based on previous research indicating that the public's causal beliefs about serious mental illnesses, such as schizophrenia, are associated with helping behaviors, treatment recommendations, and stigmatizing views toward people with these disorders. Demir et al. (2009) administered a pre-training survey to determine officers' familiarity with, and exposure to, schizophrenia. This served as the baseline for understanding officers' pre-conceived notions and implicit biases. After CIT training, the officers' perspectives were re-assessed. The findings indicated that CIT officers' understanding of causation was closer to that of those within the mental health profession, thereby correcting myths and reducing stigmatization. This suggests that CIT training may have value for increased rapport-building, de-escalation, communication between officers and family members, and, ultimately, better outcomes in terms of referrals to mental health services and fewer incarcerations (Demir et al., 2009).

Another important study supporting the utility of CIT training was conducted by Ellis (2014). In this study, several surveys were administered to measure police officers' overall views

on mental health and the importance of mental health training. In addition to a socio-demographic form, the evaluation consisted of instruments testing mental illness knowledge, perception, and attitudes. The results revealed significant changes in all of these areas toward persons with a serious mental illness at the end of a week-long CIT training program. The findings support the hypothesis that, after training, officers' knowledge, perceptions, and attitudes improve (Ellis, 2014). The results also supported the contention that CIT and related programs have value in training officers to be more sympathetic and empathic toward those with severe mental illness.

Haigh (2018) surveyed the effectiveness of CIT training for police officers in reducing the negative stigma associated with mental illness. Surveys were administered to all participating officers prior to the completion of CIT training. The responses suggested that although there were few differences in perceptions of preparedness between officers who completed CIT training and those who had not, variations in levels of mental illness stigma explained differences in officers' perceptions of preparedness to engage with such individuals. Similar findings were reported by Mulay et al. (2016) in a comprehensive evaluation of the impact of CIT training in reducing police officers' implicit bias and negative stigma about persons with a mental illness.

With a burgeoning foundation of empirical support, there is ample evidence to suggest that such programs significantly reduce explicit stigmatizing attitudes toward mental illness among criminal justice personnel.

To date, research examining the efficacy of CIT training has consistently shown that the program has numerous benefits to law enforcement training and service. Although the magnitude of benefit varies across investigations, the conclusions are highly consistent: CIT training is a

valuable program for law enforcement and the communities they serve. Moreover, CIT is more than training; of great importance is collaboration and shared knowledge of community resources (Slate et al., 2013). In addition to the intersection of mental health and criminal justice, many systems share clients, including public welfare, veterans' affairs/services, substance abuse, and foster care or dependency (Bratina et al., 2018).

Diversion Versus Arrest

Bratina et al. (2018) reviewed studies conducted across the country, many of which have been discussed above. The purpose was to analyze the utility of CIT in diverting persons with mental illness from physical arrest or the criminal justice system in general. The results of this review showed that encounters involving the mentally ill and CIT-trained officers often led to diversion to mental health services. The researchers divided the case information they obtained into four categories: arrest, no action, diversion, and diversion but jail prior to CIT. Officers participating in the review were asked to reflect retrospectively and indicate whether they would have taken an individual to jail prior to receiving CIT by selecting "yes" or "no" on the data sheets. In 346 of the 393 diverted cases, officers responded that they would have diverted even prior to CIT; in the remaining 47 cases, officers reported they diverted because of CIT (Bratina et al., 2018). These findings provide strong support for the diversionary effectiveness of CIT. Moreover, they are consistent with data obtained by Franz and Borum (2011). In their examination of 296 CIT calls, 22 resulted in arrest and 53 would have resulted in arrest prior to CIT, yielding a 7% arrest rate and a 10% prevention rate. In 2002, there were 293 CIT calls with 14 resulting in arrest and 70 that would have resulted in arrest prior to CIT, yielding a 5% arrest rate and a 19% prevention rate.

Continued Education and Online Training

A concern repeatedly expressed by law enforcement, mental health professionals, and community stakeholders alike is the need for continued education. An obstacle to increasing CIT training for police officers is the duration of training required. The CIT curriculum is currently a 40-hour course that covers essential elements needed for basic patrol officers. However, training in law enforcement is about redundancy and not convenience. Police officers are accustomed to long training days. Yet, the nature of mental health training has not historically taken priority over firearms, defensive tactics, vehicle operations, or first aid. Therefore, new and innovative ways to share training, knowledge, and experience must be explored.

This is precisely what was addressed by Crisanti et al. (2019). They focused on examining the development and benefits of creating an online videoconference or learning management system that could maintain records of training, police experiences with persons with mental illness, mental health resources, and other tools that could potentially enhance police officers' skill sets. A major limitation of the CIT model has been its application as a one-time course; opportunities for continuing education in CIT components and best practices are limited (Crisanti et al., 2019). This effort to maximize the CIT experience was referred to as CIT extension for community outcomes (CIT ECHO). CIT ECHO was designed as a hub for all things CIT including access to instructors and mental health experts via one click of a button.

An advantage of CIT ECHO is its ability to use videoconferencing technology, a system adapted from a successful medical model. CIT ECHO employs an evidence-based videoconferencing platform designed to link primary care physicians to a network of health care specialists to receive ongoing mentoring and feedback on complex patient cases (Crisanti et al., 2019). This practice alone affords greater access to mental health experts who can take actions beyond the scope of the authority of a police officer. The CIT ECHO program has rapidly grown

beyond the service clients of a police officer. Indeed, it has expanded to include personnel from all fields of public safety to enhance cross-discipline collaboration. Because of interest beyond New Mexico, and the ease with which others can join through videoconferencing technology, the geographic catchment area of CIT ECHO was also expanded (Crisanti et al., 2019). Online learning management systems are the wave of the future in education and academics. For decades now, online learning has become more fine-tuned and acceptable for learning environments. The CIT ECHO model is forward-looking and provides a full range of possibilities to (a) enhance mental health training and (b) serve as a resource for police officers and their administrators. It warrants mentioning that over a 17-month period, the CIT ECHO platform spread to collaborators in Florida, Illinois, Maryland, Minnesota, New Mexico, New York, Oregon, Texas, Washington, West Virginia, Wisconsin, and Ontario, Canada.

Research Culmination

For more than 30 years, the CIT training curriculum has been the "gold standard" for mental health training and awareness for police officers. Since its introduction in Memphis, there has been considerable investigative attention directed toward evaluating the efficacy of the program. Many of these studies have focused on the core issues or concerns. Does CIT training reduce conflict between persons with mental illness and the police officers who serve the community? The answer appears to be yes; however, to what degree? In this review of the literature, the impact of CIT training on reducing officers' stigmatization of mental illness, decreasing physical arrest, proper diversion to mental health care, and community service was examined. Police officers are tasked with "wearing multiple hats" of service. Mental illness is a societal problem that has forced law enforcement to become more creative with their training and preparedness in the area. CIT training, despite its three decades of utilization, is still in its early

stage of development. As exemplified by the CIT ECHO model, the potential exists in employing modern technology to facilitate the education of our law enforcement officers.

Future research in CIT training and its impact on public safety should be expanded to include longitudinal studies conducted on a larger sample size of police officers from diverse organizations. In addition, emphasis should be placed on examining the effect formal education (college or advanced degrees) has on police officers regarding implicit bias toward people with mental illness and the direct influence that may have on diversionary outcomes enacted by law enforcement officers. The factors examined in previous literature reviews have a redundancy in their assessments and methodologies. New exploratory strategies must be utilized to both ascertain outcomes and promote progressive methods directed toward mitigating the societal issues related to persons with a mental illness. It is from this perspective that we seek to evaluate the utility and effectiveness of CIT on a more comprehensive scale than has been done previously. The purpose of the present study is to evaluate the impact of CIT training on an officer's decision to arrest or Baker Act on calls for service involving an individual in a mental health crisis.

Research Questions

This study outlines the following research questions:

a) Are officers who receive CIT training less likely to make an arrest when compared to their counterparts who did not receive training?

b) Is there a relationship between the length of time since receiving training and the decision to arrest?

c) Does the officer's demographic background moderate the relationship between training and the decision to arrest?

It was hypothesized that those who received CIT training would be less likely to make an arrest than those without training. Additionally, we expect to see a decline in the likelihood of arrest versus Baker Act between five to ten years post-training. Finally, exploratory analyses will be conducted to determine whether the demographic characteristics of the officer moderate the relationship between training and the decision to arrest.

Chapter 3: Methodology

Participants

The research site for this study was the Broward Sheriff's Office (BSO) Department of Law Enforcement (DLE). BSO is the largest public safety organization in the State of Florida and is comprised of 5,500 employees encompassing sworn and civilian personnel (BSO, 2023). The participants of this study were selected from the DLE, which is the primary law enforcement division within the organization. All patrol deputies are assigned to the DLE and provide policing services for 16 operating districts. BSO's patrol deputies have the highest citizen contact rate with people with mental illness and crisis-related calls for service. This study utilized a retrospective cohort design comparing records of actions taken by CIT-trained and non-CIT-trained patrol officers.

Table 1

Demographic Characteristics of Responding Patrol Officers (N = 1,500)

Characteristic	n/M	%/SD
Gender		
Male	1,286	85.73
Female	214	14.27
Officer Age[a]	37.05	10.16
Years of Employment[a]	8.02	7.32
Ethnicity		
White/Caucasian	694	46.27
Hispanic/Latino	444	29.60
Black/African American	295	19.67

Asian	28	1.87
Native Hawaiian or Other Pacific Islander	2	0.13
American Indian/Alaska Native	2	0.13
Two or more races, not Hispanic/Latino	27	1.80
Not specified	8	0.53
CIT Training		
Trained	868	57.87
Not Trained	632	42.13

Note. [a]Age and years of employment are reported at the time of CFS where N = 35,663. Thus, a single officer may be captured at multiple datapoints in this calculation.

Instruments

Researchers utilized existing data obtained and secured by several of BSO's internal work management systems and employee human resource databases. Four primary database platforms were queried to attain all essential data required to assess the nature of actions taken by DLE patrol deputies when dealing with persons suffering a mental health crisis. The records management system (RMS), calls for service (CFS), Peoplesoft, and computer-aided dispatch (CAD) were used and cross-referenced to draw the most accurate data available. All data points and figures in this study were collected from BSO in accordance with Florida public records laws, rules, and regulations. The use of traditional instruments such as structured interviews, surveys, or focus groups were not applicable to this study.

Data Collection

The study reviewed BSO's calls for service (CFS) related to mental illness or suicide from 2017–2023. Before 2017, BSO's record-keeping was primarily managed using paper files that often were missing data or incomplete. Therefore, BSO's electronic records are the most

accurate account of all calls for service. This six-year review was conducted to minimize and reduce any errors caused by records that were not uploaded or captured before 2017. Moreover, utilizing the start date of 2017 allows for consistent archival analysis to be replicated by future researchers.

Procedure

The study utilized BSO's internal data collection systems to retroactively review calls for service between 2017 and 2023. A designated officer with authorized security clearance downloaded an anonymized dataset for analysis from across sections of internal BSO databases. The designated officer removed any identifying information and replaced it with a unique ID to capture multiple calls responded to by the same officer. The study team did not have access to information that links the unique ID back to any identifying information of the officer. The participant population was selected by reviewing BSO's Training Division PowerDMS platform. PowerDMS is the primary software system utilized to track training and certification records for all employees. PowerDMS is a one-stop public safety workforce platform, which provides a 360-degree approach to the problems facing law enforcement, dispatchers, firefighters, EMS, and more. Over 5,000 law enforcement organizations are currently utilizing this platform (PowerDMS, 2023). By utilizing PowerDMS, the researcher was able to identify all BSO's CIT-trained deputies and their respective CIT certification dates. Furthermore, BSO's human resources enterprise resource planning system, PeopleSoft, was used to identify tenure of employment, race/ethnicity, age, date of training, and any renewal or expiration dates associated with training requirements. A data inquiry was conducted assessing the training records allowing this study to identify all BSO deputies who were actively CIT-trained or non-CIT trained.

In addition, the researcher collected data from BSO's computer-aided dispatch (CAD) system. This platform functionality is critical for public safety organizations and assures greater field accountability in the areas of (a) incident awareness, (b) incident management, and (c) post-incident resolution. As such, comprehensive queries were performed via CAD identifying all calls for service that were classified as mental illness and suicide calls. In addition, the officer's final disposition or action taken by the responding deputies was cataloged for evaluation. This study only calls for evaluating dispositions resulting in arrest or Baker Act/diversion. Lastly, the researchers queried BSO's RMS as a secondary examination of all final depositions implemented by the responding deputies. RMS is used by deputies to create event reports that document actions taken in the field. For this study, CAD and RMS were all cross-referenced and evaluated to eliminate duplication of data or officer's final dispositions.

For further clarity, CAD is essentially a workload management system utilized by BSO call takers and dispatchers to receive emergency, non-emergency, or deputy self-initiated calls for service. Upon receiving the call for service, a call taker/dispatcher can sort, categorize the nature of service needed, and assign the necessary deputies and resources. After the deputy's arrival and actions on the scene, a final disposition is recorded in CAD. It tracks what is being requested, who is responding, a general classification of the request (i.e., suicidal threat, car crash, etc.), and a general disposition of how the deputy handled it (i.e., arrest, Baker Act, a report written, no report, etc.). RMS is how BSO documents in detail what actions were taken by officers in the field. The researchers queried CAD for anything classified as a suicide or mental illness and independently queried RMS for anything classified as a Baker/Marchman Act. The two systems can appear overlapping but have unique accountability components and provide

redundancy in tracking mechanisms. By conducting detailed queries of both systems, this study was able to reduce the probability of errors or duplicated data points being collected.

Measures

Demographic Characteristics

The demographic data for all participating deputies were retrieved from PeopleSoft, which is BSO's enterprise resource planning application. This system is primarily used by BSO for human resources, purchasing, and finance. All participating deputies' birthdates were attained to extract age, gender, race, ethnicity, date of hire, years of service, and date of law enforcement CIT certification. Lastly, a total of BSO's (16) work locations were identified and included in this study. Incorporating all work locations provided a more detailed account of the varying enforcement approaches taking place across the county, which may reveal certain patterns of actions taken by deputies based on their geographical environments.

Calls for Service (CFS)

When conducting the initial query for CFS data in CAD, a search for anything classified as a mentally ill person or suicide was considered in this study for evaluation. CAD classifications include several variations of these, such as in progress, suicidal threat, and so on; all variations were included. Each CFS has an initial classification, which is what the call taker or dispatcher initially entered based on the information provided (i.e., by the 911 caller). Each CFS also has a final classification/disposition, which is what the deputy tells the dispatcher to enter; this usually does not change, unless directed by the incident commander/supervisor.

Additionally, the researchers queried the RMS to corroborate if more than one classification was entered for any given report (arrest, written report, Baker/Marchman Act) captured under the CFS. The redundancy of evaluating and comparing BSO's record-keeping

systems allowed for a reduction in error when it comes to accurate accounts of what actions were executed in the field.

This proves important as some CFS may have been a domestic violence call that included a Baker Act and/or arrest. CAD cannot have both classifications, so it was likely to be classified as a domestic violence call and, thus, it would not have been included in the results. RMS includes both classifications, in addition to the Baker Act entry. Thus, these were included in this study's results.

CIT Training Requirement and Certification

BSO currently provides CIT training to all sworn law enforcement personnel who wish to acquire the training. As mentioned previously, a multitude of CIT programs are currently being practiced by law enforcement organizations across the country. To maintain uniformity within their training standards, BSO utilizes the traditional Memphis Model CIT 40-hour training curriculum developed and supported by the National Alliance on Mental Illness (NAMI). BSO utilizes partnerships across the county to secure training slots for all interested sworn deputies. For this study, all data provided considered CFS where at least one CIT-trained officer was on scene at the time of the response. Calls for service that pose the threat or risk of dealing with a person with mental illness typically have more than one deputy respond for safety. The data collected is based on the primary responder—that is, the responder who took the lead and submitted the final classification code/disposition. There may have been other CIT-trained responders on scene who influenced the decisions being made, but only the final classification is relevant for this study.

Data Analytics Strategy

The data analytics strategy consisted of several steps. First, descriptive analyses were performed to report summary sample characteristics (i.e., age, gender, race/ethnicity, years of service, work location, and CIT training status) and characteristics of calls for service. Means and standard deviations (SD) were reported for continuous variables, and the number (percentage) was presented for categorical variables. Second, two logistic regression (LR) models were conducted to determine if the odds of making an arrest depend on (a) whether or not an officer has been CIT trained and (b) the number of years since an officer was CIT trained. Key demographic variables, such as age and years of service, were incorporated as covariates in each model. With respect to the logistic regressions, when statistically appropriate a generalized estimating equation (GEE) component was incorporated to account for correlation induced by having multiple case reports from the same officer in the dataset (i.e., repeated measures). Key assumptions underlying GEE LR were assessed. Finally, exploratory analyses were conducted to assess (1) the degree to which the effect of CIT training varies across key demographic variables (e.g., age, gender, race) and (2) the effect of CIT training among officers who had reported having made at least one arrest. For all analyses, the type I error rate was set at $\alpha = .05$ (i.e., p-values $\leq .05$ were considered statistically significant), and all statistical tests were conducted using IBM SPSS 29.

Chapter 4: Results

Descriptive Statistics

Descriptive data relating to the calls for service (CFS) are presented in Table 2. A total of 35,663 calls involving persons with a mental illness (PwMI) across 1,500 patrol officers were identified from 2017–2023. The number of calls each officer accounts for ranges from 1 to 390, averaging 24 calls per officer (SD = 28.88). The average age of the primary officer responding to the call was approximately 37 years old; they had been certified for about 5 years and employed with the agency for 8 years. The majority of CFS (55.76%) involved officers who were CIT trained at the time of responding to the call, and on average had received training 3.23 years ago. Although the CFS were widely distributed amongst cities in Broward County, Pompano Beach accounts for the highest number of calls (24.57%), followed by Deerfield Beach (12.82%). Finally, of the 35,663 CFS identified, 23,227 (65%) involved a Baker or Marchman Act of at least one person, 197 (0.55%) involved an arrest of at least one person, and in 12,436 (35%) cases no action was reported. Of those that involved an action taken, 174 (0.49%) reported both an arrest and a Baker or Marchman Act.

Table 2

Descriptive Analyses of Calls for Service (N = 35,663) Among the 1,500 Participating Patrol Officers

Characteristic	n/M	%/SD
Age of Officer	37.05	10.16
Years of Employment	8.02	7.32
Primary Responder CIT Training		
Trained	19,884	55.76
Not Trained	15,779	44.24

Years since CIT Training[a]	3.23	2.84
City[b]		
Coconut Creek	39	0.11
Cooper City	717	2.01
Coral Springs	39	0.11
Dania Beach	2,522	7.07
Davie	97	0.27
Deerfield Beach	4,572	12.82
Fort Lauderdale	2,770	7.77
Hallandale Beach	25	0.07
Hollywood	356	1.00
Lauderdale by the Sea	303	0.85
Lauderdale Lakes	3,321	9.31
Lauderhill	196	0.55
Lazy Lake	5	0.01
Lighthouse Point	7	0.02
Margate	58	0.16
Miramar	79	0.22
North Lauderdale	2,000	5.61
Oakland Park	3,314	9.29
Parkland	494	1.39
Pembroke Park	388	1.09
Pembroke Pines	98	0.27
Plantation	46	0.13

Pompano Beach	8,762	24.57
Sea Ranch Lakes	<5	0.003
Seminole	<5	0.01
Southwest Ranches	<5	0.01
Sunrise	160	0.45
Tamarac	3,222	9.03
West Park	755	2.12
Weston	908	2.55
Wilton Manors	44	0.12
Action Taken		
Baker/Marchman Act[c]	23,227	65.13
Arrest[d]	197	0.55
Both[e]	174	0.49
None	12,413	34.81

Note. Data in this table were captured at the time of the call for service (CFS). Please note that a single officer could have been included multiple times in this calculation. [a]Years since CIT training for CFS where the officer was CIT trained (n = 19,884). [b]Cells with less than 5 were annotated as < 5 in order to protect the anonymity of officers. [c]At least one Baker/Marchman Act reported. [d]At least one arrest reported, which might not be the person in crisis. [e]At least one Baker/Marchman Act and arrest reported, which might not be the same person.

Effect of CIT Training on Arrest

To test our first hypothesis that officers who received CIT training would be less likely to make an arrest than those without training, a GEE LR was conducted to examine the relationship between CIT training (main independent variable) and the decision to arrest (dependent variable). Officer age and years of service were treated as covariates in the model. Table 3

presents the results of the GEE LR model examining the association between CIT training and

the likelihood of making an arrest while controlling for the effects of an officer's years of service

and age. The results revealed no significant effect of CIT training on the decision to arrest, after

controlling for officer age and years of service (β = -.09; SE = .17; OR= .92, 95% CI = [.66,

1.17], p = .60). Thus, whether an officer was CIT trained or not did not influence whether an

arrest was made.

Table 3

Generalized Estimating Equations LR Model for Associations between CIT Training and Arrest

	β	SE	OR	95% CI LL	95% CI UL	Generalized χ^2	p-value
CIT Trained	-.088	.165	.916	.663	1.265	.281	.596
Years of Service	.007	.018	1.007	.973	1.042	.166	.684
Officer Age	.020	.013	.980	.995	1.046	2.645	.104

Note. The analysis modeled the likelihood of making an arrest.

Given the results above, additional exploratory analyses examined the associations

between CIT training and the likelihood of arrest among those who had made an arrest. This

decision was guided by research suggesting several factors influencing bias in the decision to

arrest that were not able to be captured in the dataset (Huff, 2021). Thus, the sample was limited

to a cohort of officers who demonstrated a willingness to make an arrest, as evidenced by having

made at least one arrest. Of note, the GEE component that takes into account within-officer

correlation was excluded from this exploratory analysis due to statistical model convergence

issues. Table 4 illustrates the findings of the logistic regression model examining the relationship

between CIT training and an officer's likelihood of making an arrest while controlling for the

effects of an officer's years of service and age. Of note, this analysis only includes officers who

had made at least one arrest in the dataset. The results revealed that among officers who had

made at least one arrest, those who were CIT trained at the time of the incident were significantly less likely to make an arrest than those who had not been trained (β = -.38; SE = .15; OR= .69, 95% CI = [.51, .92], p = .01). That is, the odds of making an arrest were .69 times less likely for officers who had been CIT trained after controlling for the officer's age and years of service (see Table 4). Notably, the age of the officer and years of service were treated as covariates in this model.

Table 4

LR Model for Associations between CIT Training and Arrest Among Officers Who Made Arrests (N = 6,861)

	β	SE	OR	95% CI		Likelihood Ratio χ^2	p-value
				LL	UL		
CIT Trained	-.377	.149	.686	.512	.919	6.355	.012
Years of Service	.016	.020	1.016	.977	1.057	.657	.418
Officer Age	-.012	.013	.988	.962	1.014	.780	.377

Note. The analysis modeled the likelihood of making an arrest.

Effect of Years Since CIT Training on Arrest

To address the second research hypothesis, which indicated there would be a decline in the likelihood of arrest between 5–10 years post-training, a GEE LR model was proposed. However, due to convergence issues, the GEE component was excluded from the analysis and a binary logistic regression was utilized to examine the relationship between years since CIT training on the decision to make an arrest among those who are CIT trained. The results revealed that years since CIT training did not significantly predict whether an arrest was made (β = -.01; SE = .04; OR= .99, 95% CI = [.92, 1.06], p = .79).

Influence of Demographic Factors on the Relationship between CIT Training and Arrests

Given the findings above, which indicate that CIT training significantly predicts whether an arrest is performed among those who have made at least one arrest, post hoc analyses were conducted to examine the influence of demographic characteristics (e.g., race, age, gender) on this relationship. Three separate simple moderation analyses were performed using PROCESS (Hayes, 2022), where CIT training as the predictor of whether an arrest was made was the outcome, and race, gender, and ethnicity served as the moderators. In our first moderation model, the interaction between CIT training and the officer's age at the time of the CFS did not reach statistical significance (β = .02, SE = .02, OR = 1.020, p = .24, 95% CI = [-.01, .05]; see Table 5). These findings suggest that there was no significant moderation effect, meaning the relationship between CIT training and decision to arrest does not depend on an officer's age.

Table 5

Moderating Effects of Age on the Relationship of CIT Training and Arrest

Predictor	β	SE	OR	p	95% CI	
CIT Training	-1.039	.590	.353	.079	-2.196	.119
Officer Age	-.015	.013	.985	.253	-.040	.011
CIT Training x Age	.020	.017	1.020	.235	-.013	.053

Further, the likelihood ratio test of the interaction (X*W) effect was not significant (χ^2 = 4.101, df = 3, p = .251), indicating no significant moderation effect (see Table 6). In other words, the relationship between CIT training and likelihood of arrest was not different across racial/ethnic backgrounds of the officers.

Table 6

Moderating Effects of Race/Ethnicity on the Relationship of CIT Training and Arrest

Predictor	β	SE	OR	p	95% CI	
CIT Training	-.513	.228	.598	.024	-.959	-.067
Hispanic/Latino	-.232	.256	.792	.366	-.734	.270
Black/African American	-.222	.265	.800	.404	-.742	.298
Other	.051	.338	1.052	.879	-.611	.714
CIT Training x Hispanic/Latino	.198	.351	1.219	.572	-.489	.886
CIT Training x Black/African American	.585	.383	1.796	.127	-.166	1.33
CIT Training x Other	-.638	.690	.530	.355	-1.991	.715

Note. Whites were used as the reference group in the model. [a]Native Hawaiian/Other Pacific Islander, Asian, bi-racial, and not specified racial categories were collapsed into "Other" category due to low cell count.

Gender did not significantly moderate the relationship between CIT training and arrest (β = .25, SE = .42, OR = 1.287, p = .55, 95% CI = [-.57, 1.08]; see Table 7), meaning the relationship between CIT training and the decision to arrest did not differ based on the officer's gender.

Table 7

Moderating Effects of Officer Gender on the Relationship of CIT Training and Arrest

Predictor	β	SE	OR	p	95% CI	
CIT Training[*]	-.403	.156	.668	.010	-.709	-.098
Officer Gender	-.047	.302	.954	.877	-.639	.546
Cit Training x Gender	.252	.421	1.287	.549	-.573	1.078

Note. *p < .05

The above moderation analyses were also run on the entire sample and no significant results were observed, suggesting that gender, race, and age were not moderating variables of the relationship between CIT training and the decision to arrest.

Chapter 5: Discussion

Interpretation of Findings

Law enforcement administrators across the country are frequently challenged to create innovative ways to enhance their police officers' ability to deal effectively with people suffering a mental health crisis. Crisis intervention team (CIT) training is the premier educational curriculum designed to help police officers identify and effectively respond to individuals who are suffering a mental health crisis (Rogers et al., 2019). However, the degree to which CIT training impacts an officer's use of discretionary power to arrest continues to be an area of study for researchers. The results from this study revealed no significant effect of CIT training on the decision to arrest in the entire sample, after controlling for officer's age and years of service.

However, exploratory analyses showed that among those officers who had made at least one arrest, individuals who were CIT trained at the time of the incident were significantly less likely to make an arrest than those who had not been trained. More specifically, the difference in the likelihood to arrest among this subset of patrol officers translates to an estimated total of 68 arrests diverted by CIT-trained officers between 2017–2023. These results are consistent with findings from previous research; for example, Franz and Borum (2011) examined the dispositional data from 1,539 encounters between CIT-trained officers and persons with a mental illness (PwMI). They found that CIT significantly reduced the rate of discretionary arrest among PwMI. Similarly, Bratina et al. (2018) reported that CIT-trained officers in areas with many mental health service providers directed a higher number of PwMI to services rather than making an arrest.

Considering the large volume of calls for service evaluated (35,663), law enforcement administrators who are responsible for patrol operations should evaluate their training protocols,

practices, and policies and consider investing in the implementation of the CIT program. Despite not reaching statistical significance, the results have utility in terms of the overall implications of CIT training for operations of the entire Broward Sheriff's Office, particularly with regard to the number of individuals not being arrested.

Further, many practitioners and researchers have questioned whether an officer's decision to make an arrest of a PwMI was influenced by the timeline in which the officer received CIT training and certification. This study's results revealed that the number of years since CIT training did not significantly predict whether an arrest was made. However, researchers should not dismiss the potential influence of an officer's overall tenure and experience on the job. Their professional and personal views on dealing with people suffering a mental health crisis may change based on their scenario and the prior CIT training encountered, which may change the outcome of their actions. In addition, this investigation did not explore other potential influences, such as an officer's self-initiated advanced training in mental health or formal college training.

Previous research has identified several factors that may influence an officer's decision to utilize their discretionary power to arrest or divert to other resources, including police officers' perceptions concerning mental illness, greater self-efficacy, and referral resources (Compton et al., 2017). Hanafi et al. (2008) stated that increasing officer understanding of mental illness (1) improved their ability to recognize and respond to calls, (2) reduced stigmatization by teaching greater empathy toward such persons as well as their caregivers, (3) decreased overall arrest rates, and (4) diminished the unpredictability often found in crisis situations. Relevant to this area of investigation is the work of Compton et al. (2017), who examined the significance of self-selection bias. Specifically, the researchers attempted to ascertain whether there was a difference in performance when it came to officer's self-selecting to become a CIT-trained

officer versus being assigned by their organization. The results revealed that volunteering CIT officers have (at a median of nearly two years post-training) better opinions and attitudes about mental illness (e.g., less anger and frustration toward someone with suicidality, greater helping attitudes toward a person with psychosis). They also showed greater self-efficacy, sharper de-escalation skills, and better referral decisions. BSO deputies are not mandated to participate in CIT training; the CIT course is made available to those who volunteer for the training. All 868 participating BSO CIT-trained deputies volunteered to participate in the program.

Study Strengths

Quantitative Analysis

Utilizing a retroactive cohort design for this study provided a unique opportunity to examine a substantial (35,663 mental health crisis CFS) amount of quantitative data retrieved from a large law enforcement agency's internal platforms. The six-year analysis captured large volumes of performance outcomes, illustrating how CIT-trained deputies were performing versus non-CIT-trained deputies with regard to their final field dispositions or actions taken. Previous CIT research has generally been limited to qualitative methodology in efforts to measure the effectiveness of CIT or evaluate officer satisfaction with the program. As articulated by Edmonds and Kennedy (2016), qualitative research aims to gain insights into phenomena, groups, or experiences that cannot be objectively measured or easily quantified using statistical analyses. In this study, the quantitative measurements allowed for a scientific and systematic approach (i.e., numerical systems and data collection) to evaluate the relationships or effects of specific variables such as tenure, years since CIT training, age, gender, and ethnicity.

Diverse Participants and Population

Another strength of this study is the diversity reflected in the participation of 1,500 deputies whose ethnicities closely mirror the overall community demographics of Broward County. Of the 1,500 deputies, their ethnic breakdown consisted of 694 White/Caucasian (46%), 444 Hispanic/Latino (29%), 295 Black/African American (19%), 28 Asian (1.8%), and 39 (2.6%) identified as other. According to the US Census (2023), Broward County's overall population is 1,962,531. When examining the county's three largest ethnic populations (33% White, 30.5% Black, and 32.5% Hispanic), BSO patrol deputies included in this study encountered a multitude of individuals from a wide range of ethnicities.

Single Source Organization

Researchers seeking to examine the effectiveness of CIT training are often limited in gaining access to police departments' or sheriffs' offices' internal data related to training or CFS. Consequently, they must attempt to gain information and study participants from numerous regional law enforcement agencies who are willing to contribute or share sensitive data. This study utilized BSO as the single source participating agency. Selecting a single agency strengthens the study's ability to indirectly account for any change in cultural norms, training standards, and organizational goals that often differ from one agency to the next, which may influence an officer's decision to arrest versus utilizing diversionary action. BSO deputies receive the same CIT training and apply their discretionary powers based on leadership expectations, organizational policies and procedures, and community needs. Although empirical research has not conclusively established the efficacy of CIT training, previous investigative efforts suggest that CIT training may have value in changing officers' perceptions, street-level practices, and/or enforcement practices (Compton et al., 2017).

Generalizability

Bachman and Schutt (2019) identified two key aspects of generalizability: (1) <u>sample generalizability</u>—the ability to generalize from a sample or subset of a large population to that population itself, and (2) <u>cross-population generalizability</u>—the ability to generalize from findings about one group, population, or setting to another group, population, or setting. In this study, generalizability was evaluated in three types of applications: population, ecological, and temporal. Population generalizability can be applied to both small and large law enforcement organizations. In this investigation, both CIT- and non-CIT-trained deputies represented BSO's 16 patrol districts. This is a considerable sample size that can be comparable to any large metropolitan police department. Ecological generalizability is relevant as applied to similar communities that reflect large and diverse populations. Pertaining to temporal generalizability, this study included archival data obtained over a six-year period (2017–2023).

During this interval, numerous changes occurred in Broward County's economy, population density, and employment rates. Although this investigation did not measure how those variables shape deputies' decisions and actions, we cannot dismiss their potential influence. It is also noteworthy that some of the data collected were from 2020–2022 during the COVID-19 pandemic—an unprecedented period that impacted the quality of life for everyone. However, there were no indications that the pandemic influenced deputies' discretionary powers to arrest or divert.

Limitations

Variable CIT Programming

The variability is considerable regarding the content and implementation of CIT programs across the country. According to the National Alliance on Mental Illness (NAMI), over

2,700 communities nationwide are providing CIT to law enforcement, mental health providers, hospital emergency services, and individuals with mental illness along with their family members (National Alliance on Mental Illness, 2019). The CIT model continues to expand and gain support as a training aid for law enforcement professionals and other community stakeholders. Regardless of who the end-users are, the CIT program is often modified to meet organization, practitioner, or population needs.

According to Compton et al. (2008), approximately 400 CIT programs were operating across the United States. The CIT 40-hour curriculum provides the baseline "minimum standards" required to successfully obtain a certificate of completion. However, it does not control for content or training mechanisms included in the curriculum. For example, some law enforcement organizations have excluded or increased role-playing scenarios. Despite the wide range of law enforcement organizations participating in CIT, there are no federal or state mandates that regulate standards for such training. The impact of variability in programming can be asserted to the Broward Sheriff's Office as well. Deputies in this study likely experienced varying teaching principles, content, and different instructors over time.

Mental Health Resources and Facilities

This study captured retrospective data available from BSO collected over the course of six years. Several internal platforms were used to ascertain actions and outcomes in the course of a deputy's response to a person with a mental health crisis. One threat to external validity is the unknown contributing factors that could have influenced a deputy's decision. BSO calls for service related to individuals suffering a mental health crisis exceeded over 35,000 calls. These calls for service reflected varying times of day, cities, district commands, and locations. The variation in these non-controllable variables may have impacted the decision to arrest or divert

an individual toward mental health services. For example, if a deputy was patrolling on the midnight shift (5 pm to 5 am), depending on their assigned district there may be limited access to mental health resources and facilities.

Reassignment and Attrition

The study included an analysis of 1,500 sworn law enforcement deputies' actions and outcomes as they related to dealing with people suffering a mental health crisis. Data were drawn from BSO's patrol districts/locations throughout the course of six years. BSO does not have a policy restricting CIT-trained or non-CIT-trained deputies from seeking transfers to other jurisdictions, nor are they restricted from seeking promotional opportunities. It can be expected that several deputies may have transferred from one district to another. A change in district location (city) introduces new environmental considerations and cultural norms that may impact the deputy's decision-making. As indicated in Table 2, the calls for service in each city reflect varying degrees of need. For example, the city of Pompano Beach demonstrated the greatest need (8,762 mental health calls) for CIT deputies, while some cities received less than five calls for service. Deputies who work in cities with large populations are typically responsible for working a higher volume of general calls for service, which creates a culture of expedience: "Get to the call fast and resolve it fast." This is counterintuitive to the CIT approach and philosophy, which emphasize active listening skills, the display of empathy, and building rapport (Browning et al., 2011). To effectively apply the CIT methodology, officers must take a slower and more comprehensive approach to assessing and dealing with individuals suffering from a mental health crisis.

Implications for Policy Implementation and Future Research

Law enforcement administrators should develop a minimum refresher training initiative to ensure that all CIT officers are continuing their education in this specialized and important area. Every mental health crisis or episode is unique and requires knowledgeable and experienced police officers to meet the unpredictable nature of these calls for service. Moreover, law enforcement administrators should develop operational policies and procedures that will require CIT officers and mental health experts to be deployed to all calls for service when mental health issues are identified by the call taker/dispatcher. BSO has created and introduced a multitude of policy reforms and programs to help in meeting the needs of their community and first responders as it relates to dealing with individuals suffering a mental health crisis.

BSO is developing an annual 16-hour refresher course related to mental health awareness and field management, which all CIT-trained personnel will be mandated to complete and which is available for any sworn law enforcement to attend. Mandatory CIT training for all deputies has not yet been implemented due to the lack of supportive research. As stated by Compton et al. (2017), little research is available on whether self-selected/volunteering officers differ from assigned officers in meaningful ways after completing CIT training. Researchers in this study found no significant modifiers in the relationship between length of time since receiving CIT training and officer's discretionary actions related to diverting or arresting PwMI.

After the February 14th, 2018, Marjory Stoneman Douglass High School massacre, BSO invested in building a state-of-the-art real-time crime center (RTCC). The RTCC is the primary surveillance and intelligence center for safeguarding the county's school system. BSO's Threat Management Division (TMD) is responsible for the day-to-day operations and investigations of all threats received by the RTCC. To date, BSO has live-feed access to over 25,000 cameras spread across 256 public schools in the county. The live-feed access enhances first responders'

ability to respond to a scene swiftly with accurate intelligence on what may be occurring at the site location. Since its inception period February 2019, a total of 4,566 threat investigations have been initiated, of which 1,780 were directly related to a school threat. BSO's TMD have made over 400 arrests and have submitted over 350 risk protection orders (RPO).

In October of 2020, BSO's TMD incorporated behavioral health license therapist clinicians (BHLTC) into their RTCC to increase efforts to divert individuals who demonstrate the need for mental health services toward professional mental health resources and away from potential arrest. The implementation of BHLTC was a direct byproduct of witnessing a greater need to provide mental health services for our student population. Over the course of the last four years (2020–2024), BHLTC have deployed into the field with investigators and performed 2,364 mental health referrals (Broward Sheriff's Office, 2023). Although BHLTC is not part of the CIT training program, it does demonstrate alternative methods that law enforcement administrators can implement to help address the mental health issues facing their communities. In addition, in 2019 BSO launched their "BSO Cares" program. BSO Cares has established a registry for people with developmental disorders, such as autism. This registry is part of a free community service program that allows emergency personnel to respond to and serve the community with disabilities better when help is needed. This program is available to anyone who resides in or frequently visits Broward County who has a developmental disability diagnosis. BSO is currently seeking ways to expand the program to include more frequently encountered mental health disorders.

In addition, law enforcement administrators should afford more training opportunities by developing direct partnerships with organizations such as NAMI. Locally, NAMI serves as the program administrator for CIT training courses. However, NAMI-sponsored CIT is not always

readily accessible or feasible for police departments that must send their officers to a 40-hour training program, especially when the training requires travel. A CIT-officer-led "train-the-trainer model" is an alternative that would allow police departments' training divisions to host internal CIT courses specifically based on their agency's needs. In the case of BSO, the reliance on NAMI to provide courses creates a waitlist of students/officers from across the county. Similar problems are likely encountered in both large and small police departments across the country. BSO invested 70 million dollars building a state-of-the-art research, development, and training center (RDTC), and the facility will serve as the preferred host site for CIT training and certification. The RDTC and CIT course training will be available to all 17 Broward County municipal police departments.

Law enforcement administrators should seek ways to expand CIT and mental health training for their call-takers and dispatchers. Call-takers and dispatchers are the first line of communication with individuals calling for emergency services. It is imperative that each member possess the training and skills essential for recognizing those CFS that require mental health expertise. BSO mandates CIT training for all newly hired dispatchers during their Regional Communications Training Academy. Implementing such training assures new candidates receive the necessary training from the onset of their careers. Moreover, it establishes a culture of compassion and sensitivity to this national mental health crisis. The same approach can be incorporated into how newly hired deputies are trained.

Furthermore, this study focused exclusively on retroactively assessing data retrieved from BSO's internal tracking systems, creating a quantitative analysis of numbers and figures. Future research should be expanded to include more qualitative measurements. This is critical to accurately gauge the effectiveness of CIT training on how it influences or modifies an officer's

decision-making. Utilizing or integrating qualitative research principles allow for researchers to implement instruments such as interviews, surveys, questionnaires, and case study reviews. These instruments provide a more robust or in-depth evaluation on how officers are perceiving their experiences or encounters with people suffering a mental health crisis. In essence, by incorporating qualitative principles, researchers can provide rich, detailed insight into officers' thoughts, feelings, and behaviors, all of which shape their decision-making.

In addition, future research can be broadened to include smaller municipal and rural police departments. Incorporating such police departments into a comparable study expands researchers' ability to generalize their findings when it comes to national best practices and the application of CIT. In 2022, the Bureau of Justice Statistics (BJS) released its Census of State and Local Law Enforcement report. According to the BJS, the majority (69%) of state and local law enforcement agencies (17,541) employed 24 or fewer sworn officers, and less than 1% (80) of agencies employed 1,000 or more. BSO's sworn law enforcement officer population consists of over 1,627 deputies throughout the organization. Therefore, this study is more applicable to the other 79 agencies that employ over 1,000 officers.

Lastly, CIT research currently lacks in terms of evaluating the relationship between CIT students and their instructors. Oftentimes, the focus in CIT research has sought to examine the effectiveness of the training but fails to consider the impact of varying instructor principles, practices, lectures, and philosophies. Examining these variables may yield data results that provide feedback on the most critical aspects of the course, student, and instructor relationship.

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