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A Mixed-methods Approach To Examining The Memphis Crisis Intervention Team (cit) Model: An Exploratory Study Of Program Effectiveness And Institutionalization Processes

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A MIXED-METHODS APPROACH TO EXAMINIING THE MEMPHIS CRISIS INTERVENTION TEAM (CIT) MODEL: AN EXPLORATORY STUDY OF PROGRAM EFFECTIVENESS AND INSTITUTIONALIZATION PROCESSES

by

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ABSTRACT

The present study utilized a mixed-methods strategy to examine the effectiveness, diffusion, and institutionalization of the Memphis Crisis Intervention Team (CIT) model. To evaluate the effectiveness of the training component of the CIT model, a panel research design was employed in which a sample of 179 law enforcement officers and 100 correctional officers in nine Florida counties were surveyed on the first day of training (pretest), the last day of training (posttest), and one month following their completion of CIT training (follow-up). These surveys measured the extent to which CIT training achieved several officer-level objectives, including increased knowledge of mental illness and the mental health referral process, improved self-efficacy when responding to mental health crises, and enhanced perceptions of verbal de-escalation skills, mental health services in the community, and the mental health referral process. The results of these surveys revealed officers experienced a statistically significant increase on every measure of training effectiveness between the pretest and posttest data collection points. However, a significant decline was found among the 117 officers that responded to the follow-up survey on the measures associated with self-efficacy and perceptions of verbal de-escalation, which points to a measurable decay in the effectiveness of the training in the intermediate timeframe with regard to these two measures. To examine the extent to which the diffusion of the CIT model resembles a social movement in the field of criminal justice and to explore the impact of CIT institutionalization on the organizational structure of criminal justice agencies, an online survey was distributed to 33 representatives of law enforcement and correctional agencies known to participate in the CIT program in the nine Florida counties in which officers were surveyed. The results of this survey indicate interagency communication and external pressure

from mental health providers and advocates largely contribute to the decision of criminal justice agencies to adopt the CIT model. In addition, the findings of this survey suggest criminal justice agencies modify their organizational structure in a number of different ways to internalize and institutionalize the CIT model. By coupling a training program evaluation with an assessment of diffusion and institutionalization, this study makes a unique contribution to organizational and evidence-based literature.

This project is dedicated to the most influential people in my life. To my amazing parents, whose love and support knows no bounds, thank you for always believing in me and teaching me how to believe in myself. I certainly would not be where I am today without the two of you by my side. To my grandmother, Nona, you play such an important role in my life and you are my inspiration as I strive to make a difference in this world. To my Aunt Doris, I thank you for always being in my corner and giving me constant reassurance over the years. To my best friend Megan and my boyfriend Michael, words cannot express how much you both mean to me. I thank you both for never letting me walk away from this project and for providing continual encouragement. Finally, I thank God for blessing me with a phenomenal support system that has given me the strength and determination to chase my dreams.

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CHAPTER 1: INTRODUCTION

Mental illness is a public policy concern that pervades every facet of the public sector in communities around the United States. Individuals with mental illnesses struggle to maintain housing and employment, which propels them cycling through various systems of care throughout their lifetime. The responsibilities of intervening, managing, and treating this population are shared by numerous mechanisms of formal social control, including the criminal justice system. Understanding how the criminal justice system responds to mental illness is paramount to developing the most effective and appropriate intervention strategies. The purpose of the present study is to conduct a comprehensive examination of a formal criminal justice response to mental illness across nine counties in Florida. The Memphis Crisis Intervention Team (CIT) model has been widely adopted across the country and around the world. Therefore, gaining an understanding of the true effectiveness of this model will contribute to the evidence-based literature surrounding this widespread criminal justice program.

Persons with a mental illness have long been subject to some type of social control due to their inability to conform to social norms and the incomprehensibility of the behavior they tend to display. The cycles of social control, referred to as "Master Patterns" by Cohen (1985), exerted on persons with a mental illness in the United States have included informal control within tightknit communities, followed by several formal social control movements including institutionalization, deinstitutionalization, and incarceration. Historically, the extent to which the criminal justice system has been utilized to exert formal social control on persons with a mental illness has been driven partially by shifting perceptions surrounding the social meaning of mental

illness and the resulting policy changes in the mental health field. In addition, social scientists have influenced the changing nature of social control surrounding mental illness by evaluating the effectiveness and appropriateness of the aforementioned "Master Patterns."

Scope of the Problem

While the criminal justice system was originally developed solely to enforce the law and punish wrongdoers, the responsibilities of this system have expanded over time. Stemming from numerous policy failures in the mental health field, agents of the criminal justice system are now faced with the challenge of intervening and managing situations involving persons with a mental illness on a regular basis. According to the Council of State Governments in the Criminal Justice Mental Health Consensus Project (2002), law enforcement officers typically encounter persons with a serious mental illness in one of the following scenarios: 1) as a victim of a crime, 2) as a witness to a crime, 3) as the subject of a call for assistance, 4) as a suspected offender, and 5) as a danger to themselves or others. An estimated 7-10% of all police contacts involve a person with a mental illness (Borum, Deanne, Steadman, & Morissey, 1998; Wells & Schafer, 2006). Results from a survey of law enforcement officers from three different agencies indicated that approximately 92% reported having responded to at least one mental health crisis in the month prior to the survey, with 84% reportedly responding to more than one of these incidents during the same timeframe (Borum, et al., 1998). Likewise, people with a mental illness often report coming into contact with law enforcement, with many of them having been arrested at least once (Borum, 2000).

Lacking adequate dispositional alternatives, law enforcement officers often resort to arrest when resolving incidents involving persons with a mental illness. As a result, the burden of

caring for and managing this population has been transferred back to correctional facilities. According to James and Glaze (2006), approximately 56% of all State prisoners and 64% of all local jail inmates reported having a mental health problem. This same report indicated that 14% of State prisoners and 24% of jail inmates reported experiencing psychotic symptoms (i.e. hallucinations and delusions). The shift from one form of institutionalization (i.e. psychiatric hospitalization) to another (i.e. incarceration) as the formal social control response to mental illness has been termed "transinstitutionalization" or "transcarceration." (Erickson & Erickson, 2008; Lurigio & Swartz, 2000).

In Florida, the statistics follow the nationwide trend for the rates of arrest and incarceration found among persons with a mental illness. According to a report presented by the Florida Supreme Court (2007), approximately 125,000 individuals booked into Florida jails each year have a diagnosed mental illness. This report also suggests that roughly 23% of county jail inmates and 17% of prison inmates in the State of Florida have a serious mental illness. This translates to approximately 16,000 prison inmates and 15,000 local jail inmates with a serious mental illness on any given day in Florida (Florida Supreme Court, 2007). These figures enumerate the breadth of mental illness as a social problem that pervades the criminal justice system throughout the country and in Florida specifically.

The disproportionate rates of arrest and incarceration found among persons with a mental illness have compelled members of the criminal justice system to collaborate with members of the mental health field to create diversionary strategies to mitigate this burden. These strategies reflect the broader problem-solving approach that has been embraced within the criminal justice system since the late 1980s. This approach incorporates the model of therapeutic jurisprudence,

which stresses the importance of utilizing the legal system as a pathway to treatment for those persons coming into contact with the system with a mental illness. The focus of the present study is to conduct a comprehensive examination of the Memphis Crisis Intervention Team (CIT) model, a diversionary program that was developed to improve the criminal justice response to persons with a mental illness.

Current Study

The Memphis Crisis Intervention Team (CIT) model was established in the late 1980s following the fatal police shooting of an individual with a history of mental illness. This model was originally conceived as a pre-booking diversionary strategy designed to connect individuals experiencing a mental health crisis in the community to the appropriate treatment setting as opposed to the traditional criminal justice alternative. However, the program has diffused to correctional settings to help address mental health crises occurring among inmates. CIT can now be viewed as a problem-solving tool utilized throughout the criminal justice system to improve responses to mental illness and its concomitant problems.

The two primary elements of the Memphis Crisis Intervention Team (CIT) model are a 40-hour specialized training curriculum provided to a subset of officers within law enforcement and correctional agencies and a community-wide collaboration between the criminal justice and mental health systems. The training curriculum is specifically designed to enhance the ability of officers to recognize and respond to situations involving persons with a mental illness. The collaboration among mental health providers and criminal justice agencies facilitates open communication among these groups of practitioners and works to streamline the mental health referral process.

The present study examines the effectiveness, diffusion, and institutionalization of the Memphis Crisis Intervention Team (CIT) model in nine counties in Florida. This study addresses three major research questions:

1) Does the CIT training curriculum achieve the intended officer-level objectives?
2) What factors facilitate the diffusion of the CIT model throughout the counties included in the study?
3) To what extent has the CIT model become an institutionalized practice in law enforcement and correctional agencies included in the sample?

To answer the first research question, a training program evaluation was conducted using a panel research design in which law enforcement and correctional officers were surveyed at three points in time: 1) first day of training (pretest), 2) second day of training (posttest), and 3) one month following their completion of the training (follow-up). This approach is an effective method for identifying significant changes in responses on measures of program effectiveness over time. This aspect of the study is intended to build on the evidence-base surrounding this currently accepted practice in the field of criminal justice.

To answer the remaining two research questions pertaining to diffusion and institutionalization, representatives from law enforcement and correctional agencies within the nine counties included in the study were surveyed using a cross-sectional design. The individuals selected for the study were identified as having extensive knowledge surrounding their agency's decision to adopt the model as well as the extent to which it has become institutionalized within the agencies they represent. The theoretical framework that guided the construction of the specific hypotheses that were tested for this aspect of the study incorporates tenets of

institutional theory and the concept of a social movement. In this study, the diffusion of the Memphis CIT model throughout the Florida counties in the sample is being conceptualized as a social movement that has resulted in the institutionalization of this practice within law enforcement and correctional agencies represented in the sample.

This aspect of the study highlights the factors that facilitate the diffusion of this model within the study sites. Of particular importance to this component of the study is gaining insight into how this model has diffused from the law enforcement to the correctional domain of the criminal justice system. This study also attempts to identify indicators of institutionalization within criminal justice agencies. The extent to which an institutionalized practice becomes internalized and pervades the organizational culture are important considerations for future research surrounding currently accepted practices within the field of criminal justice and other public sector organizations (Frumkin, 2004; Davis, McAdams, Scott, et al. 2005).

Significance of Study

The current study seeks to address the existing gaps in the literature by taking a dual-pronged approach to examining this formal criminal justice response to mental illness. While prior research has explored the extent to which the CIT training program achieves the objectives just outlined among law enforcement officers, the effectiveness of this training among correctional officers has not been explored extensively. In addition, prior research has been limited to measuring only one or two of the training objectives within a single geographical location. The present study involved a comprehensive training evaluation by examining all of the aforementioned objectives within a broad geographical area, nine counties in Florida.

This study examined the Memphis Crisis Intervention Team (CIT) model in nine of Florida's fourteen counties that have implemented the program in both law enforcement and correctional agencies. Out of the 67 counties in Florida, thirty have at least one criminal justice agency that has adopted the model. The counties included in this study are Alachua, Collier, Hillsborough, Orange, Osceola, Palm Beach, Polk, Sarasota and Volusia. These counties comprise approximately 32% of Florida's overall population and 30% of the State's average daily jail population. In addition, an estimated 34% of all arrests that occurred in Florida in 2011 took place in these nine counties (Florida Department of Law Enforcement, 2012).

In addition, prior research has not developed a theoretical framework to explain the diffusion and institutionalization of the Memphis CIT model. The current study frames the diffusion of CIT as a social movement utilizing tenets of institutional theory (Davis, McAdams, Scott, & Zald, 2005). This study also adds to the institutionalization literature by measuring the extent to which this model has modified the structure of criminal justice organizations. In total, this study attempts to overcome the shortcomings of previous studies surrounding this topic by incorporating correctional officers, covering a broad geographical area, and employing a panel research design.

The two pieces of this study are separate but interrelated. The existing research surrounding the CIT model has provided some evidentiary support for the effectiveness of the training. While several research studies have found the training effectively achieves certain objectives, the methodological strategies previously employed meet the minimal standard for evidence-based practices set forth by Taxman and Belenko (2012). Therefore, the findings

derived from these studies can only be interpreted as weak evidentiary support for program effectiveness.

Regardless of the lack of empirical evidence that exists supporting the program, the CIT model has diffused broadly and rapidly throughout the criminal justice field. This begs the question as to what perpetuates the diffusion of a program that does not qualify as evidence-based. This study intends to address that question in addition to assessing the extent to which the actual effectiveness of the training aligns with the perceived legitimacy of the program, as measured by changes made to organizational structure as the program becomes institutionalized. This study makes a unique contribution to the evidence-based literature and organizational theory by examining how a practice only weakly supported by evidence permeates an organizational field and brings about dramatic organizational change.

CHAPTER 2: LITERATURE REVIEW

Defining Mental Illness and Mental Health Crises

Establishing a concrete definition of mental illness is complicated by conflicting points of view surrounding the issue. According to Horwitz (2002), there are two schools of thought that generate opposing theoretical explanations underlying the social meaning of mental illness. The psychiatric perspective postulates that mental illness encompasses a wide array of diseases that can be categorized according to their symptomology and diagnostic criteria, similar to physical illnesses. A "mental disorder" as defined by the Diagnostic and Statistical Manual IV is "a clinically significant behavioral or psychological syndrome or pattern that occurs in an individual that is associated with present distress (e.g., painful symptoms) or disability (i.e., impairment in one or more important areas of functioning) or with a significantly increased risk of suffering death, pain, disability, or an important loss of freedom" (APA, 2000: xxxi). This definition also precludes any syndrome or pattern that is a temporary response to a particular event, as "it must currently be considered a manifestation of a behavioral, psychological, or biological dysfunction in the individual" (APA, 2000: xxxi). The psychiatric perspective focuses on identifying the root causes of mental illness and using classification schemas to design appropriate treatment regimens (Horwitz, 2002).

The opposing theoretical position is referred to as the labeling (societal reaction) perspective, which postulates that mental illness is merely a socially constructed status and label assigned to individuals that demonstrate disturbing patterns of behavior that deviate from societal norms (Horwitz, 2002; Scheff, 1999). According to Horwitz (2002), the main characteristic

defining behavior that is typically associated with mental illness is incomprehensibility. Behavior that is considered incomprehensible to the social observer is that which cannot be explained by rational thought processes that govern typical social interaction. In addition, the motivation for the behavior is beyond the scope of social understanding. Furthermore, the behavior may seem grossly inappropriate, bizarre, and extremely disorganized. According to Horwitz (2002), the behavior associated with mental illness is perceived as unpredictable and at times, dangerous. Therefore, societies tend to identify two categories of mental illness, "nonviolent eccentricities" and "violent forms of madness," both of which are associated with notably deviant behavior (Horwitz, 2002: 19).

Szasz (1960) postulated that while the term mental illness denotes a disease of the brain, when society assigns the label of mental illness to an individual they are typically reacting to abnormal behavior displayed by that individual as opposed to the presence of a detectable brain disease. Therefore, it is it the presence of deviant behavior that violates psychosocial, ethical, or legal norms that generates the label of mental illness, not an identifiable psychiatric ailment (Szasz, 1960). From this perspective, mental illness itself is not a real social or medical problem until it becomes socially constructed as such.

Labeling is the societal reaction to a social problem. Prior to being assigned a label, a social problem must first be constructed. The social constructionist approach has been applied broadly to explain the manner in which all social problems are identified, legitimized, and addressed. Blumer (1971) proposed that "a social problem exists primarily in terms of how it is defined and conceived in a society" (pg. 300). He outlined five stages involved in the social construction of a social problem. The first stage in the process is the emergence of a social

problem, which typically involves raising public awareness of a particular issue by the government or special interest groups. Next, the social problem is legitimated through a broader social acknowledgement of the problem as an issue of concern (Blumer, 1971).

The third step entails the mobilization of action to address the social problem, which stems from extensive debate surrounding the type and extent of intervention needed to curtail the social problem (Blumer, 1971). Following mobilization of action, an official plan of action is created through which a formal response to the social problem is initiated. The final step in the construction of a social problem is the implementation of the official plan of action (Blumer, 1971). Spector and Kitsuse (1973) expanded upon Blumer's process by incorporating the production of alternative solutions to social problems generated in response to dissatisfaction with the official plan of action. This expansion takes failure into account by recognizing that the first official plan of action may not always be the most efficient or effective.

The mobilization of action in response to a social problem is often referred to as formal social control (Chriss, 2007; Horwitz, 2002). According to Scheff (1999), gaining an understanding of mental illness as a social problem requires examining the formal responses to this issue. The mechanism of formal social control that focuses primarily on controlling deviant behavior that is perceived as potentially harmful to the safety and order of society is the criminal justice system. Therefore, agents of the criminal justice system are frequently responsible for the intervention and management of incidents involving persons with a mental illness displaying behavior that is threatening to self or others. These incidents have been termed "mental health crises" or "mental health emergencies" (Hendricks & Byers, 2002).

According to Hendricks and Byers (2002), a crisis can be defined as "unpleasant psychological and social feelings/sensations, which result from the onset of a perceived insurmountable stressful life event, disrupting stability, and accompanied by an inability to adjust or cope" (pg.4). The impact of a stressful life event can be exacerbated by a serious mental illness resulting in a mental health crisis in which the person may become psychologically unstable and display maladaptive, incomprehensible behavior. The courts have ruled that formal intervention is necessary if an individual poses an imminent threat to themselves or others, or displays behavior that is indicative of self-neglect (Florida Senate, 2008). Agents of the criminal justice system are the principal first-responders to these incidents occurring in the community and within correctional facilities.

The Historical Evolution of the Social Control of Mental Illness

Among those theories that rely on social consensus as their basis for explanation, members of society collectively develop norms, or shared expectations of behavior that are considered acceptable in a particular society (Chriss, 2007; McCaghy, 1985). The notion of social control suggests that there are mechanisms operating in society that utilize a system of rewards and sanctions to encourage norm-conforming behavior and discourage behavior that violates societal norms (Chriss, 2007; Scheff, 1999). Behavior that disregards social expectations is labeled "deviant" and is often subject to informal or formal social control (McCaghy, 1985; Scheff, 1999). Informal social control typically involves citizen intervention to gain social norm compliance from another citizen. Conversely, formal social control entails the engagement of an organized systemic response to deviant behavior. The extent to which societies rely upon formal social control is linked directly to the failure or inadequacy of informal social control

mechanisms. When the system of informal social control fails to render the desired behavioral outcome, formal social control is initiated (Chriss, 2007).

The manner in which social control is perceived and executed evolves over time in relation to the dominant ideological viewpoint that governs such a response. Cohen (1985) referred to the major historical shifts in the social control of deviant behavior as "Master Patterns." He argued that these "Master Patterns" determine the size and density, identity and visibility, and penetration of the social control exerted on individuals engaged in deviant behavior. As mentioned previously, mental illness is a label that is typically assigned to individuals displaying deviant behavior that violates a psychosocial, ethical or legal norm (Scheff, 1999). As such, persons with a mental illness have long been subjected to some type of informal or formal social control in the United States.

In colonial America, networks of informal social control were strong and individuals that displayed deviant behavior were typically cared for by family members within tightknit communities. As the colonies experienced unprecedented economic growth, these cohesive communities started to erode and the informal system of social control weakened. As stated by Horwitz (2002: 101), "the breakdown of social cohesiveness in Western societies resulted in a more dramatic exclusion of the mentally disturbed." As a result, a new "master pattern" emerged that stressed the importance of isolation and segregation of those that threatened social order (Cohen, 1985).

The Rise of Institutionalization

The birth of the total institution to house deviants has been primarily attributed to the profound economic changes that occurred in the eighteenth century. According to Goffman (1961), a total institution is any facility in which movement is restricted, life is regimented and social segregation is a requisite. The characteristics of the total institution as laid forth by Goffman (1961) apply to workhouses, psychiatric hospitals, jails, and prisons alike. Residents of these facilities are isolated from the outside world and lose their sense of freedom in its entirety.

Foucault (1965) and others (Brown, 1985; Mechanic, 1989; Mechanic & Rochefort, 1990; Slate & Johnson, 2008) have asserted that the total institution emerged in response to the industrialization and urbanization of society occurring during that time. From this perspective, workhouses were constructed to segregate the proportion of the population failing to contribute to the economy, which included the homeless, the very poor and persons with a mental illness. The purpose of the workhouse was to remove these individuals from the working class in an effort to promote productivity. Within the institutional environment, these individuals were forced to work in some capacity (Foucault, 1965).

Scull (1977) elaborated on this economic perspective by noting the impact of the capitalist marketplace on the development of the total institution. He argued that this truly represented a shift from the old paternalistic social order to a capitalist system that was accompanied by a decreased social obligation to the proportion of the population that was unsuitable for the workforce. According to Scull (1977: 341):

> "The quasi-military authority structure of the total institution seemed ideally suited to the inculcation of "proper" work habits among those marginal elements of the workforce most resistant to monotony, routine, and regularity of industrialized labor."

With the initial development of the total institution, persons with a mental illness were not separated from other social outcasts. All categories of socially-defined deviants were collectively segregated from the working class to foster industrialization and to ensure the functioning of the capitalist marketplace. In an effort to maximize productivity among this population, it became necessary to distinguish between the able-bodied and non-able bodied deviants. In addition, it became increasingly obvious that housing persons with a mental illness in the same institutions as the able-bodied poor hindered productivity in the workhouses (Scull, 1977).

Those responsible for oversight within these total institutions found it impossible to manage persons with a mental illness while supervising the makeshift workforce. The few local jails in existence during the 1700s were utilized as housing alternatives for this population. However, the burden of managing these individuals amidst the presence of inmates posed the same problem in these institutions. Thus, it was apparent that persons with a mental illness needed to be identified and separated from other deviant groups. Privately owned and operated asylums emerged as a solution to this problem. In fact, the "trade in lunacy" became a lucrative business opportunity for local entrepreneurs (Scull, 1977: 344).

However, the growth of the single national economic market undermined the need for locally based systems of control. This coupled with the high cost of contracting with private entrepreneurs to house deviant populations led to the establishment of a state-sponsored system

of control. This reformation was met with staunch resistance from local authorities. However, reformers ultimately succeeded in designing a new formal system of control for persons with a mental illness in which state-funded asylums were constructed and subjected to regular inspection (Scull, 1977). The first public psychiatric hospital opened in 1773 in Williamsburg, Virginia at the behest of mental health reformer Dorothy Dix, who urged the State to respond to mental illness with a system of treatment as opposed to forced labor (Slate and Johnson, 2008).

In the late 1700s and early 1800s, an entirely new profession was established providing expertise in the management of this population. Psychiatry offered a scientific approach to classifying, diagnosing, and treating persons with a mental illness. The psychiatric profession was accompanied by a realignment of the social construction of mental illness, as it was no longer viewed as demonological and animalistic. The general public began viewing these individuals as "mad" or sick, as opposed to "bad" or evil (Chriss, 2007).

Also during this time, the psychiatric perspective of the social meaning of mental illness was embraced. Mental illness was now perceived as a disease of the mind that could be treated with intensive therapeutic techniques (Slate & Johnson, 2008). Psychiatrists stressed the importance of the institutional environment as the necessary setting for the moral treatment and rehabilitation of persons with a mental illness (Scull, 1977). Thus, the psychiatric hospitals came to embody a medical model of social control in which mental illness was redefined as a medical problem (Chriss, 2007; Slate & Johnson, 2008).

Institutionalization would reign for nearly a century as the predominant social control response to persons with a mental illness (Horwitz, 2002; Scull, 1977). Prior to 1810 in America, there were only 500 patients being housed in insane asylums throughout the entire country

(Horwitz, 2002). This figure increased exponentially along with population growth and the expansion of formal social control over the next century. According to Torrey (1997), the number of patients in psychiatric hospitals rose from 41,000 in 1880 to 559,000 in 1955. This steady increase in the size of the population needing inpatient psychiatric services overwhelmed the mental health system. As a result, the rehabilitative ideal that accompanied the institutionalization era began to crumble (Horwitz, 2002; Scull, 1977; Torrey, 1997).

An additional factor that played a role in the disintegration of institutionalization was the anti-psychiatry movement that emerged in the 1950s and 60s. This movement consisted of a collective of reformers challenging the legitimacy of the psychiatric profession. The champions of this movement believed that medicalizing mental illness provided the "diagnosed" with an excuse to avoid personal responsibility in society (Szasz, 1960, Slate and Johnson, 2008). In addition, they argued that the state should have no involvement in the provision of psychiatric services, as the authorities could misuse "psychiatric coercion" to silence non-conformists (Slate & Johnson, 2008, pg. 31).

Also during this time, the Quakers, Mennonites and Brethren revealed the deplorable conditions they found while they were embedded in psychiatric hospitals during World War II as a service to the country (Erickson & Erickson, 2008; Mechanic & Rochefort, 1990; Torrey, 1997). Accusations of inhumane treatment of patients fueled concerns surrounding the involuntary commitment of individuals with a mental illness to long-term hospitalization. In addition, the advent of psychotropic medications that effectively reduced the symptoms associated with mental illness made institutionalization less necessary (Erickson & Erickson, 2008, Lurigio & Swartz, 2000; Mechanic, 1989; Mechanic & Rochefort, 1990; Torrey, 1997).

The Deinstitutionalization Movement

The Civil Rights Movement of the 1960s brought substantial scrutiny of all social institutions, and the mass institutionalization of persons with serious mental illnesses was among the primary issues of concern (Mechanic, 1989; Slate & Johnson, 2008). Civil rights attorneys began filing class action lawsuits challenging the legality of long-term institutionalization and exposing the maltreatment occurring within state hospitals. During an era of civil unrest, mental health reformers and civil libertarians were able to "frame deinstitutionalization as serving the freedom, self-determination, autonomy, dignity, and integrity of the mentally ill" (Erickson & Erickson, 2008, pg. 31). Deinstitutionalization in this context refers to curtailing the use of hospitalization as the primary mechanism of mental health service delivery and establishing an adequate system of care in the community (Erickson & Erickson, 2008; Mechanic, 1989; Mechanic & Rochefort, 1990, Slate & Johnson, 2008). It is worth noting that deinstitutionalization also occurred around this time in other areas of the world, such as Western Europe, Australia, and New Zealand, making it somewhat of an international policy fad for a few decades (Fakhoury & Priebe, 2002).

President John F. Kennedy announced early in his presidency that he was interested in shifting the locus of mental health care from psychiatric institutions to less restrictive community-based settings (Erickson & Erickson, 2008; Mechanic & Rochefort, 1990). His stated goal was a fifty percent reduction in the number of institutionalized psychiatric patients within ten to twenty years (Mechanic & Rockefort, 1990). The first major step toward deinstitutionalization occurred in 1961 when the Joint Commission on Mental Illness and Health produced a report entitled "Action for Mental Health," which proclaimed that lengthy stays in

psychiatric hospitals were having deleterious effects on persons with a mental illness resulting in decreased psychological functioning among the institutionalized population. In the interest of reducing the suffering associated with long-term institutionalization, this Commission recommended a fundamental realignment of the mental health delivery system that sought to reduce the use of hospitalization and increase the utilization of less-restrictive community mental health centers (Erickson & Erickson, 2008; Mechanic & Rockefort, 1990; Torrey, 1997).

Stemming from the recommendations of the Commission, the Community Mental Health Centers Act of 1963 allocated large sums of federal dollars to state agencies for the development of a community system of care (Brown, 1985; Erickson & Erickson, 2008; Mechanic, 1989; Mechanic & Rochefort, 1990). In addition, the Institutionalized Medical Exclusion was a federal law enacted at the same time that prohibited the use of Medicaid funds for state psychiatric hospitals, jails, and prisons. These laws concomitantly paved the way for an overhaul of the mental health system in the United States. Torrey (1997) equates deinstitutionalization to one of the largest social experiments in American history as he asserts that the number of patients in psychiatric hospitals decreased from 559,000 in 1955 to a mere 71,619 in 1994. This dramatic decline in institutionalization reflects a "master shift" in the manner in which society has chosen to respond to this problem (Cohen, 1985). Approximately 92% of those individuals that would have been living in psychiatric hospitals if the institutionalization policies were still in existence are now being treated in the community or living without treatment (Torrey, 1997).

With the growth of the welfare state in the 1960s, formal policies were enacted to release many patients from psychiatric hospitals, which laid the groundwork for a shift to community-based service delivery in the field of mental health (Mechanic, 1989; Brown, 1985). However, by

1980 only 700 community mental health centers were funded, representing roughly half of the 1500 centers needed to adequately treat this population (Mechanic & Rochefort, 1990). Thus, many individuals were released from psychiatric institutions without a safety net. The massive reductions in social welfare spending in the mid-1980s further constricted the establishment of mental health centers, leaving many communities with inadequate resources required to establish reliable systems of care (Erickson & Erickson, 2008; Mechanic & Rochefort, 1990).

Furthermore, policymakers neglected to account for the proportion of this population that would be unwilling or incapable of navigating the community-based system of care. Those patients released from psychiatric institutions with severe mental illnesses were among those least likely to effectively access services in the community due in part to their inability to recognize their need for mental health services (Erickson & Erickson, 2008). Additionally, the next generation of individuals in need of psychiatric care entered an unstable system that lacked the capacity to manage this growing population. In sum, the services being provided in the community were "highly fragmented, uncoordinated, and inaccessible" resulting in a system-wide failure to meet the needs of persons with a mental illness (Lurigio & Swartz, 2000: 56).

As asserted by Horwitz (2002), the weakened system of informal social control that precipitated the establishment of psychiatric hospitals is also linked to the failure of community care. The deinstitutionalization movement did not reflect a shift toward a more communal society that would reestablish informal social control. Instead, the community-based care model was instituted as a new means of formal social control in which the responsibility of caring for individuals with a mental illness was shifted to local mental health organizations. However,

without informal support networks, persons with a mental illness were unable to effectively cope with deinstitutionalization (Horwitz, 2002).

This movement has been largely blamed for a greater number of persons with a mental illness experiencing homelessness and encountering the criminal justice system (Erickson & Erickson, 2008; Lurigio & Swartz, 2000; Teplin, 1984). According to the National Coalition for the Homeless (2009), approximately 20-25% of the U.S. homeless population has a serious mental illness. This figure is markedly higher than the prevalence of serious mental illness among the general population, which is estimated at 6% (National Coalition for the Homeless, 2009). Wright (1988) argues that due to varying diagnostic criteria and definitional measures, any attempt to approximate the presence of mental illness among the homeless population will vastly underestimate the actual figure.

According to Teplin (1984), deinstitutionalization, the tightening of civil commitment laws and inadequate community treatment alternatives have collectively increased the visibility of persons with a mental illness on urban streets around the country. However, this trend has not been accompanied by a greater tolerance of this population by the general public. The dangerousness stigma attached to the erratic and disruptive behavior that is typically associated with mental illness often compels citizens to invoke the criminal justice system to manage incidents involving this population that occur in the community (Teplin, 1984).

Research suggests that as rates of psychiatric hospitalizations decrease, incarceration rates increase, and vice versa (Slate & Johnson, 2008). This indicates a reciprocal relationship between the mental health and criminal justice systems in the social control of this population. This trend has been documented recently as jails across the United States experienced a 154%

increase in admissions of persons with a mental illness between 1980 and 1992, while psychiatric hospitalization rates were on a steady decline (Slate & Johnson, 2008). The link between deinstitutionalization and the heightened rates of incarceration among persons with a mental illness has been termed "transinstitutionalization" or "transcarceration," indicating that the responsibility of housing this population has been transferred to correctional facilities around the country (Erickson & Erickson, 2008; Lurigio & Swartz, 2000). The heightened role of the criminal justice system in the social control of persons with a mental illness is often attributed to the deinstitutionalization movement in the field of mental health.

The Criminal Justice Response to Mental Illness

The criminal justice system was originally developed in the United States to serve as the legal social control mechanism to resolve citizen disputes impartially and to protect citizens from threats to social order (Duffee & Maguire, 2007). From a social constructionist perspective, written laws were established to reflect social expectations of behavior, or social norms. Behavior that violates the norms that have been codified into law is labeled criminal and is subject to punishment. The criminal justice system has evolved into the mechanism of formal social control that enforces the laws that have been enacted to reflect social norms (Duffee and Maguire, 2007; Scheff, 1999). However, agents of the criminal justice system are often responsible for responding to noncriminal situations that jeopardize the safety and order of society. This is particularly relevant with regard to individuals with a mental illness displaying incomprehensible behavior that may not be committing an illegal act but may elicit criminal justice intervention, particularly if they pose a threat to themselves or others (Florida Senate, 2008; Slate and Johnson, 2008).

While the situations they encounter may differ contextually, as first-responders in the criminal justice system, both law enforcement and correctional officers are often responsible for the identification and management of incidents involving persons with a mental illness. In both the community and correctional setting, the basic criteria for intervention are the same. These first responders have a duty to intervene when an individual poses a threat to themselves or others, or appears unable to care for themselves.

Additionally, the role of the criminal justice system in the social control of persons with a mental illness is dynamic, meaning it fluctuates in accordance with the external environment within which it is embedded (Duffee & Maguire, 2007). The current criminal justice response to mental illness stems from changes that have taken place within both the fields of mental health and criminal justice. For the reasons noted previously, the deinstitutionalization movement that occurred in the mental health field directly increased the number of encounters between law enforcement and persons with a mental illness and has resulted in a heightened rate of incarceration among this population. Taking into consideration the challenges associated with managing situations involving persons with a mental illness, a fundamental philosophical realignment has transpired in the criminal justice system that couples the responsibility of protecting public safety with strategies to address major crime-producing social problems, such as mental illness.

The Emergence of Therapeutic Jurisprudence

In the mid-late 1980s, legal scholars began contemplating the possibility of utilizing the criminal justice system as an avenue to treatment for persons with a mental illness. The term "therapeutic jurisprudence" was first used by David Wexler in 1987 as "the study of the role of

the law as a therapeutic agent" (Winick, 1997, pg. 184). The field of study that emerged began incorporating knowledge pertaining to the fields of mental health and related disciplines to inform the legal system to function in a manner in which therapeutic outcomes are obtained. Of utmost concern for those studying this subject is the therapeutic or antitherapeutic consequences of the law (Wexler, 2000; Winick, 1997).

Therapeutic jurisprudence recognizes that the legal system has a fundamental impact on the quality of life of those coming into contact with the system. As such, the potential exists to maximize the benefits and minimize the harm being done to individuals encountering the system, particularly those in need of therapeutic intervention. Initiatives manifesting the therapeutic jurisprudence model focus on treatment and rehabilitation of offenders, as opposed to punishment and retribution as criminal justice objectives (Wexler, 2000; Winick, 1997).

Most strategies that are employed to use the criminal justice system as a mechanism to facilitate therapeutic intervention with regard to persons with a mental illness involve extensive collaborations between the criminal justice and mental health systems. According to Morrissey, Fagan, and Cocozza (2009), the integration of these two systems can more effectively meet the needs of persons with a mental illness, while ensuring the maintenance of public safety. Munetz and Griffin (2006) constructed a sequential intercept model that identifies five points in the criminal justice process at which collaborations between these two systems could improve the outcomes of persons with a mental illness. These "points of interception" are "opportunities for an intervention to prevent individuals with mental illnesses from penetrating deeper into the criminal justice system" (Munetz & Griffin, 2006: 4).

The first intercept is the point of initial police contact, which can be enhanced by providing police with the training needed to recognize and mange incidents involving persons with a mental illness (Munetz & Griffin, 2006). The second intercept, initial detention and initial court hearings, can effectively improve the outcomes for persons with a mental illness by implementing pre-trial diversion programs and establishing linkages to community mental health services (Munetz & Griffin, 2006).

The third intercept involves two separate stages, the courtroom process and the point of incarceration. According to Munetz & Griffin (2006), the courtroom process can be improved by developing specialty courts with separate dockets, and the point of incarceration can be enhanced by providing jail-based mental health services. The fourth intercept is jail or prison re-entry, at which time it is recommended to devise a re-entry plan and coordinate transitional services for those exiting incarceration. The final intercept is community corrections, which can be improved by implementing an intensive supervision strategy for individuals with a mental illness that encompasses graduated responses and modification of supervision conditions based on compliance (Munetz & Griffin, 2006).

One example of a comprehensive collaborative effort between the mental health and criminal justice systems in Florida that has attempted to incorporate these points of interception is the Eleventh Judicial Circuit Criminal Mental Health Project. Representatives from the criminal justice system, such as the state attorneys, public defenders, circuit court judges, law enforcement personnel, and the Miami-Dade Department of Corrections have partnered with stakeholders from the mental health system (i.e. community mental health providers, local hospitals, and mental health advocates) to develop a comprehensive program that links persons

with a mental illness encountering the criminal justice system in this jurisdiction with mental health resources in the community. The Mental Health Project has pre-booking and post-booking diversionary components that serve to "alleviate the burden placed on our criminal courts and jails while helping those with mental illnesses get the treatment they need and deserve" (Perez, Leifman, and Estrada, 2003: 66).

Many policies stemming from therapeutic jurisprudence focus on devising alternatives to the traditional legal dispositions. These alternatives typically entail diverting individuals whose criminal behavior is attributable to an underlying mental illness toward treatment and away from incarceration. By focusing on the individual treatment needs of those entering the criminal justice system with a mental health issue, these programs address concerns surrounding the criminalization of mental illness (Lamb & Weinbeiger, 2008; Watson, et al., 2001). Additionally, by reducing the rate of arrest and incarceration among this population, these programs reduce the likelihood of further stigmatization and victimization within the system, while enhancing the likelihood of them receiving adequate services and achieving positive outcomes (Compton, et al., 2011; Schneider, 2008; Watson, et al., 2001).

Criminal Justice Diversion

The focus of the present study is to examine a criminal justice initiative that began as a pre-booking diversionary program that morphed into a tool utilized throughout the U.S. criminal justice system to address mental health crises both in the community and in the correctional setting. There are two categories of criminal justice diversion: pre-booking diversion, which encompasses programs aimed at directing individuals toward the mental health system as soon as

they encounter law enforcement, and post-booking diversionary programs, which serve to divert persons into mental health treatment after their initial arrest (Compton, et al., 2011).

One of the primary goals of mental health-related diversionary programs is to channel persons with a mental illness toward an appropriate treatment setting when possible, as an alternative to the traditional criminal justice setting (Compton et al., 2011). By minimizing their contact with the criminal justice system, pre-booking diversionary programs may help reduce the likelihood of persons with a mental illness experiencing psychological deterioration while being processed through the system, and concurrently increase their likelihood of receiving the appropriate treatment needed to stabilize their condition (Compton, et al., 2011; Perez, et al., 2003; Schneider, 2008; Watson, et al., 2001). There are three primary approaches to pre-booking diversionary programs. The first approach is police-based specialized mental health response, in which mental health experts are contracted by local police departments to provide on-scene assistance to officers handling a mental health crisis. For example, the Birmingham, Alabama Police Department employs six civilian employees as Community Service Officers to act as social workers and professional interventionists when police officers respond to mental health and other social service-related calls, such as domestic violence and missing persons cases. According to Compton et al. (2011), the use of Community Service Officers has reduced the arrest rate of individuals with a mental illness and has saved the agency an estimated $2,200 per case in decreased officer time and incarceration costs.

The second pre-booking diversionary approach is the mental-health based specialized mental health response. Mobile crisis units are comprised of mental health professionals that serve as second-responders to mental health crises. They are called upon by local police agencies

to provide on-site assistance when resolving issues involving persons with a serious mental illness or developmental disability. They can also provide transportation and referral services. In Knoxville, Tennessee for every 100 incidents involving the mobile crisis unit, 5% resulted in arrest, 17% were resolved at the scene, 36% were referred to treatment, and 42% resulted in transportation to a treatment facility (Steadman, Deane, Borum, et al., 2000).

The third approach, the police-based specialized police response provides law enforcement officers with specialized mental health training. The officers that receive the training are utilized as first-responders to mental health crises. The Memphis Crisis Intervention Team (CIT) model is an example of this approach, in which a department has a subset of specially trained police officers that are dispatched to calls for service involving persons with a mental illness. The Memphis Crisis Intervention Team (CIT) model also represents a comprehensive collaboration between the mental health and criminal justice systems at the community level. Among the noted positive outcomes of the program, reduced arrests of persons with a serious mental illness and increased psychiatric referrals reflect the diversionary element that lies at the core of this model (Compton, et al., 2011). This program has recently been expanded to the corrections, which means that correctional officers are now receiving mental health training to manage mental health crises in their facilities.

One research study compared the three pre-booking diversionary approaches just described by asking officers to report their perceptions of program effectiveness (Borum et al., 1998). In this study, program effectiveness was measured by the extent to which the officers perceived the program was meeting the needs of people with a mental illness in crisis, keeping people with a mental illness out of jail, minimizing the amount of time officers spend on these

types of calls, and maintaining community safety. Borum et al. (1998) found that officers within the department that utilized the police-based specialized police response (CIT) responded much more favorably with regard to all measures of effectiveness when compared to the other two approaches.

An additional study conducted by Steadman et al. (2000), compared the dispositions of 100 calls for service involving persons with a mental illness for each of the aforementioned pre-booking diversionary models. Their findings suggest that 75% of the calls handled by the Memphis Crisis Intervention Team resulted in the transportation of an individual to a mental health treatment facility, compared to 20% of those handled by the Birmingham Community Service Officers and 42% of those managed by the Knoxville mobile crisis team. In addition, they found that the Memphis CIT program reported the lowest rate of arrest (2%), when compared to the Birmingham and Knoxville models, which reported arrest rates of 13% and 5%, respectively (Steadman et al., 2000).

Other diversionary efforts occur following the arrest of an individual with a mental illness. One approach to post-booking criminal justice diversion is the establishment of problem-solving courts. Emerging in the late 1980s to address the overwhelming flow of drug offenders cycling through the system, problem-solving courts have become a widely adopted method of diverting offenders into treatment as an alternative to incarceration (Berman, Fox, & Wolf, 2004). The problem-solving court model initially focused on diverting nonviolent lower-level drug offenders into court-monitored substance abuse treatment. However, the model has now been expanded to encompass other specialized cases, such as homeless offenders and those with mental health issues or prior military experience. One of the latest innovations in the area of

problem-solving courts is the coupling of mental health and drug courts in the establishment of co-occurring courts.

The first mental health court was established in Broward County, Florida in 1997. As of 2006, there were ninety adult mental health courts in the United States with an aggregate caseload of 7,560 clients (Redlich, Steadman, Monahan, et al., 2006). There are several defining characteristics of mental health courts, including the maintenance of a separate docket containing only offenders with a mental illness with a single judge making decisions within the court. In addition, mental health courts mandate community mental health treatment for offenders and typically require medication compliance and engagement in individual and group therapy. Continual supervision of clients and imposition of sanctions for noncompliance are key elements to mental health court programs (Redlich, et al., 2006).

To elucidate the impact of mental health courts on offenders with a mental illness, research suggests that these courts are uniquely beneficial to offenders as they seek to address the treatment needs of the offender, as opposed to focusing on the punishment aspect of justice (Lamb & Weinberger, 2008; Watson, Hanrahan, Luchins, & Lurigio, 2001). These courts have been linked to reduced rates of recidivism, enhanced access to care and improved overall functioning among clients involved in these programs (Schneider, 2008). According to Schneider (2008), mental health courts have also been applauded for cost savings attributable to the avoidance of incarceration for these offenders. As stated by Watson et al. (2001): "Mental health courts are a promising innovation on the continuum of interventions for offenders with mental illness (pg. 479)."

Additional post-booking programs include probation or parole-based mental health programs and forensic assertive community treatment (fACT) programs (Compton, et al., 2011). Many probation and parole agencies across the country are developing specialized programs for offenders with a mental illness under their supervision. These programs entail court-mandated mental health treatment and intensive supervision by the designated probation or parole officer. The forensic assertive community treatment programs utilize mobile teams that are deployed to provide mental health treatment, vocational and transportation services, and much more to offenders that are at a high-risk for homelessness or hospitalization upon release from jail (Compton, et al., 2011). Some agencies are also providing specialized mental health training, such as Crisis Intervention Team (CIT) training to certain probation and parole officers to provide them with the necessary tools to identify and mange offenders with a mental illness.

The diversionary programs outlined here reflect the therapeutic jurisprudence model of justice that has transformed the criminal justice response to persons with a mental illness. Additional changes within the law enforcement and correctional domains of the criminal justice system align closely with the notion of therapeutic jurisprudence. The community policing model that has dominated law enforcement over the last few decades has prompted the development of numerous problem-solving strategies to address social problems, such as mental illness, in communities around the county. In corrections, separate housing units and treatment programs have been established to meet the needs of inmates with a mental illness.

Law Enforcement Response to Mental Illness in the Community

The law enforcement response to persons with a mental illness was dramatically altered by the widespread adoption of the community-oriented policing model in the late 1970s and

1980s (Oliver, 2000; Morabito, 2010). The community policing model emerged in response to scrutiny surrounding the relationship between law enforcement and the public they serve. Community members felt the police were out of touch with local social problems that influenced the quality of life of citizens (Oliver, 2000). This prompted a realignment of police agencies around the country to address citizen complaints by gaining an understanding of the problems that permeated city streets.

According to Morabito (2010), three main elements define community-oriented policing. The first element is the adoption of a problem-solving orientation, meaning police agencies develop strategies to address the crime-producing social problems in their communities. Second, working relationships are established between key community stakeholders to actively engage other organizations and community members in public safety. Third, internal organizational changes occur to integrate community participation in the criminal justice process.

The problem-solving approach to policing which embodies the community-policing model has become the predominant strategy for the intervention and management of major social problems in communities around the country. With the interactions between law enforcement and persons with a mental illness on the rise following deinstitutionalization, the manner in which police have chosen to respond to this social problem has been largely driven by the community-policing model and the broader therapeutic jurisprudence diversionary initiatives.

The point of initial police contact represents one of the most pivotal decision-making points in the criminal justice system. For situations involving persons with a mental illness, the law enforcement decisions at the scene can forge a pathway to treatment for those in crisis or alternatively set in motion the wheels of the criminal justice system for those considered

ineligible for diversion. With regard to law enforcement intervention in situations involving persons with a mental illness, the courts have ruled that individuals can be involuntary remanded for psychiatric evaluation when clear and convincing evidence indicates that this person poses an imminent threat to themselves or others, or displays an inability to care for themselves (Slobogin, 2006). The rationale underlying the involuntary commitment of individuals is grounded in the state's paternalistic responsibility (*parens patriae*) to protect those that are unable to care for themselves or threaten to harm themselves or others (Lamb, Weinberger, & DeCuir, 2002).

In Florida, the law that governs this type of law enforcement intervention is the "Florida Mental Health Act" or the "Baker Act," which was enacted in 1971 by the Florida Legislature. According to the Florida Senate (2008), this civil commitment law permits the involuntary examination and placement of a person into outpatient or inpatient treatment when the following criteria are present:

"Without care or treatment, the person is either likely to suffer from neglect resulting in a real and present threat of substantial harm that can't be avoided with the help of others, or is likely to cause serious bodily harm to himself or others in the near future, as evidenced by recent behavior" (pg. 2).

The Baker Act also requires that a person believed to have a mental illness has refused voluntary psychiatric examination or is unable to consent to examination. As outlined by the Florida Senate (2008), an involuntary examination can be initiated in the State of Florida in three ways. Firstly, an *ex parte* court order can be issued that directs a law enforcement officer or other agent of the court to take an individual to the nearest psychiatric receiving facility based on sworn testimony of a third-party petitioner. Secondly, a medical professional can initiate a Baker

Act within 48 hours of conducting an examination on an individual that they have reason to believe meets the criteria for civil commitment. It is worth noting that medical personnel in a jail or prison can also initiate a Baker Act on an inmate if deemed necessary. Finally, a Baker Act can be initiated by a law enforcement officer upon their observation of an individual demonstrating behavior that meets the criteria for involuntary psychiatric examination (Florida Senate, 2008).

Once a Baker Act has been initiated, the individual must be evaluated by a physician or clinical psychologist within 24 hours. Additionally, a person cannot be detained in a psychiatric facility against their will for longer than 72 hours, and must be able to inform others of their whereabouts. Within 72 hours, the person must be released for voluntary outpatient or inpatient treatment, or they must be released entirely if not being charged with a crime and continuing treatment is not needed. If an individual is unwilling to provide informed consent for ongoing voluntary inpatient or outpatient placement, a petition to the circuit court can be filed by the receiving facility requesting an extension of involuntary treatment (Florida Senate, 2008).

According to the Florida Senate (2008), between 1999 and 2006, the state of Florida experienced a 72% increase in involuntary commitments initiated by the legal system. Law enforcement officers initiated 48% of the 122,443 involuntary examinations that occurred in Florida in 2007 (Florida Senate, 2008). This figure illustrates the substantial role played by the criminal justice system in the social control of mental illness. Furthermore, an estimated 7-10% of all police contacts involve a person with a mental illness (Borum, Deanne, Steadman, & Morissey, 1998; Wells & Schafer, 2006). Results from a survey of law enforcement officers from three different agencies indicated that approximately 92% reported having responded to at

least one mental health crisis in the month prior to the survey, with 84% reportedly responding to more than one of these incidents during the same timeframe (Borum, et al., 1998). Likewise, people with a mental illness often report coming into contact with law enforcement, with many of them having been arrested at least once (Borum, 2000).

The influx of persons with a mental illness entering the criminal justice system following the deinstitutionalization movement has led to the assertion that mental illness has become criminalized. The term "criminalization of mental illness" was coined by Abramson in 1972 when he referred to the high rates of arrest and incarceration among persons with a mental illness. Underlying the criminalization hypotheses is the notion that persons with a mental illness are more susceptible to criminal justice intervention than the general population due to their perceived dangerousness in society (Abramson, 1972; Erickson & Erickson, 2008; Perez et al., 2003; Teplin, 1984).

Teplin (1984) criticized previous studies examining this hypothesis as they failed to take into account factors other than mental illness that may have predicted greater arrest and incarceration rates, such as seriousness of offense. In response to the shortcomings of prior studies surrounding this topic, Teplin (1984) sought to determine if a person exhibiting signs of a mental illness was more likely to be arrested than someone not displaying these signs, all other factors being equal. She conducted an in-depth observational study in which the nature of police-citizen interactions was documented for two urban police precincts in Chicago, which included 1,382 police-citizen encounters involving 2,555 citizens. A person was considered to be displaying signs of a mental illness if they demonstrated visibly abnormal behavior typically attributable to a serious mental illness, such as hallucinations and symptoms of mania. The

findings from this study indicated that those citizens presenting signs of a mental illness were 20% more likely to be arrested than those not demonstrating behavior indicative of an underlying mental illness. According to Teplin (1984), the disproportionate arrest rate of persons with a mental illness could reflect the inability of officers to identify mental illness. She posited that police officers might be less likely to resort to arrest if they possess the knowledge needed to recognize that an individual is in need of psychiatric services (Teplin, 1984).

Regardless of whether mental illness has actually become criminalized, police encounters with persons displaying signs of a mental illness often pose an intractable predicament. With the limited number of crisis beds available in the mental health system and the bureaucratic impediments to mental health referrals, the police often lack dispositional alternatives to arrest. This has resulted in high rates of arrest and incarceration among this population (Erickson & Erickson, 2008; Lurigio & Swartz, 2000 Teplin, 1984). The resulting "transinstitutionalization" or "transcarceration" of persons with a mental illness has shifted the burden of care from the mental health system directly into the correctional system, which is ill-equipped to provide psychiatric services (Erickson & Erickson, 2008; Lurigio & Swartz, 2000).

Mental Illness in the Correctional Setting

Managing inmates with a mental illness poses a significant challenge to the correctional system. Some researchers suggest that conditions of confinement often exacerbate symptoms of mental illnesses, making it difficult to provide effective mental health treatment in this setting and increasing the likelihood of a mental health crisis occurring (Adams & Ferrandino, 2008; Appelbaum, Hickey, & Parker, 2001; Lurigio & Swartz, 2000; Metzner & Fellner, 2010; National Commission on Correctional Health Care, n.d.; Tartaro & Lester, 2009). Hendricks and

Byers (2002) assert that incarceration can have a crisis-producing effect on individuals, and should be addressed by appropriate crisis intervention strategies. Feelings of isolation and shame in addition to the loss of social support systems have been associated with mental health crises occurring in the correctional setting (Hendricks & Byers, 2002).

Among the most concerning issues faced by correctional administrators is the prevalence of self-harm and suicide among this population of inmates. Prior research suggests that inmates with a mental illness are at an increased risk for self-harm and suicide (Blaauw, Kerkhof, Hayes, 2005; Tartaro and Lester, 2009). In a study conducted by Blaauw et al. (2005), the characteristics of ninety-five jail and prison inmates that committed suicide were compared to 247 inmates from the general prison population to identify unique characteristics that may put an inmate at risk of suicide. They reported a much higher rate of a diagnosed mental illness among the group of inmates that committed suicide (73%) when compared to the general population comparison group (12%). However, a recent study conducted by Hayes (2012) that examined the characteristics of 464 jail suicides that occurred between 2005 and 2006 in a nationally representative sample of jails suggests that a history of mental illness among jail inmates that commit suicide is less prevalent than previously noted. In this study, only 38% of the jail suicides involved an inmate with a prior history of mental illness. While the actual prevalence of mental illness among jail inmates committing suicide may fluctuate, several other studies have documented that the presence of a mental illness does place an inmate at a greater risk of suicidal ideation and completion (Anno, 1985; Denoon, 1983; Dooley, 1990; Green et al., 1993; Marcus & Alcabes, 1993).

The Miami-Dade County Jail is presently considered the largest psychiatric facility in the state of Florida, as it houses more persons with a mental illness than any other institution in the entire state (Florida Supreme Court, 2007). In this facility alone, correctional staff must handle at least half a dozen suicide attempts in any given night and manage roughly 800 to 1200 persons with a serious mental illness (Florida Supreme Court, 2007; Lurigio & Swartz, 2000). According to Ross (2010), suicides represented 32% of all deaths that occurred in U.S. jails in 2002. Additionally, suicide is the third leading cause of death in jails and prisons, behind natural causes and complications from AIDS (Tartaro & Lester, 2009).

Tartaro and Lester (2009) purport that the suicide rate among jail inmates has been declining steadily over the last few decades, from 129 per 100,000 in 1983 to 47 per 100,000 in 2002. However, jail suicide rates are still substantially higher than the annual suicide rate of the general population, which has remained steady between 10.4 and 13.7 per 100,000 since 1960 (Tartaro & Lester, 2009). The reported suicide rate found among prison inmates is substantially lower than jail inmates. The mean suicide rate for female prison inmates between 1978 and 1996 was 6.84 per 100,000, while the mean suicide rate for male prison inmates was 19.24 per 100,000 during this timeframe (Tartaro and Lester, 2009).

According to Hayes (1995), the differential suicide rate found among jail and prison inmates can be explained by taking into consideration the unique characteristics of the jail environment that heighten the risk of suicide. The jail environment is conducive to suicidal behavior because it represents the first point at which the inmate is removed from society and isolated from friends and family. This feeling of isolation is compounded by the loss of freedom and the uncertainty of what the future may hold. Many inmates in the jail setting are facing a

crisis situation in which they may be experiencing withdrawal from alcohol or drugs, guilt or shame surrounding their criminal behavior, and the painful loss of their support system. An underlying mental illness can greatly exacerbate the crisis situation (Hayes, 1995; Hayes, 2012).

The crisis situation that accompanies these feelings of loss and uncertainty is most profound upon initial incarceration. Thus, the majority of jail suicides occur within the first 24 hours of admission (Hayes, 1995; Hayes, 2012). Hayes (1995) argues that prison inmates are at a slightly lower risk of suicide because they have somewhat adjusted to the crisis-producing nature of incarceration. The high suicide rates found among jail and prison inmates are particularly troublesome to correctional administrators because the commission of a suicide by an inmate is typically followed by a civil lawsuit in which a judge must determine whether the suicide resulted from negligence or "deliberate indifference" on behalf of correctional staff (Ross, 2010).

According to Tartaro and Lester (2009), suicides are most likely to occur in isolation cells within jails and prisons alike, in which the inmate spends 23-24 hours a day in solitary confinement. Inmates with a mental illness are more likely than the general population of inmates to find themselves in these segregated housing units, as they tend to have a difficult time abiding by institutional rules and conforming to institutional norms (James & Glaze, 2006; Metzner & Fellner, 2010; Tartaro and Lester, 2009). According to Audferheide (2012), inmates with a mental illness in the Florida prison system are two-four times more likely than inmates without a mental illness to be housed in segregation or solitary confinement units. Mental health advocates argue against the use of segregation, asserting that while in segregation inmates receive minimal psychiatric treatment and their level of psychological functioning diminishes

greatly, thereby increasing the likelihood of suicide among inmates in these housing units (Metzner & Fellner, 2010).

To address the high rates of mental illness and suicidal ideation found among jail and prison inmates, correctional facilities have implemented numerous mental health treatment programs. These treatment programs include "screening inmates at intake for mental health problems, providing therapy or counseling by trained mental health professionals, and distributing psychotropic medication" (James & Glaze, 2006: 9). Some institutions have also implemented reentry programs to help bridge the gap between the correctional environment and the community for inmates with a mental illness upon release. However, all of the aforementioned services are limited in availability and scope within correctional facilities.

According to a nationwide survey conducted by the Bureau of Justice Statistics (2006), only 11% of the 479,000 jail inmates with a mental illness reported receiving some form of mental health treatment since admission, with the most commonly reported treatment being prescription medication (9%). Inmates in State prison systems are slightly more likely than jail inmates to receive treatment, partially due to their lengthier stays in custody. Approximately 19% of the 705,000 state prison inmates with a reported mental illness received some type of treatment since admission. They also reported prescription medication as the most common form of treatment received (15.1%) (James & Glaze, 2006). According to Metzner and Fellner (2010), over half of the state correctional systems that were asked to complete a survey about their institutional mental health treatment services reported a shortage of qualified mental health staff. The collective impact of inadequate staffing, scarce resources, and the anti-therapeutic lockdown environment found within correctional facilities makes it very difficult to provide effective

mental health treatment to jail and prison inmates. Absence of much-needed treatment leaves many inmates in a constant state of mental health crisis, contemplating suicide, self-harm, or harm to others.

As first-responders in jails and prisons, correctional officers are often responsible for the initial identification and management of mental health crises occurring within these institutions. As noted by Dvorskin and Spiers (2004), correctional officers have more contact with inmates than any other member of the correctional staff. As such, they are typically the first to recognize an inmate engaging in disturbing behavior and serve as the first line of response to these incidents. With regard to intervening in a mental health crisis, "a well-trained and conscientious correctional officer is more likely to be responsible for diffusing a potential problem than is any member of the mental health staff" (Dvorskin & Spiers, 2004: 47).

According to Adams and Ferrandino (2008), correctional officers have expressed their desire for more extensive training on the identification of mental health problems among inmates. Furthermore, correctional officers feel they could greatly benefit from the acquisition of skills that can enable them to handle a mental health crisis. One concern among administrators is that if you train correctional officers to identify an inmate with a mental illness, certain inmates may feign symptoms to avoid punishment for rule violations, which can put the security of the institution at risk. However, providing adequate mental health training to correctional officers can minimize liability threats and increase the likelihood of an appropriate response to incidents involving inmates with a mental illness (Adams & Ferrandino, 2008). Conversely, by training correctional officers to effectively manage mental health crises, correctional facilities are

susceptible to lawsuits if the officers fail to appropriately handle a situation involving an inmate with a mental illness when they possess the skills to do so.

The correctional system presently struggles to balance institutional security and the treatment needs of inmates. As indicated, the prevalence of mental illness among persons encountering the criminal justice system places an enormous burden on every element of the system. In response to the "transcarceration" that has taken place since the deinstitutionalization movement, reformers in the criminal justice and mental health systems across the country have formed collaborations to develop pre and post-booking diversionary programs to alleviate the burden being placed on the correctional system and facilitate treatment for this population.

Over the last few decades, the criminal justice system has undergone fundamental changes that have led to the development of innovative strategies to manage the proportion of persons entering the system with mental health issues. The therapeutic jurisprudence model of justice brought to light the importance of utilizing the legal system as a tool for treatment and rehabilitation. This has resulted in the development and implementation of numerous diversionary strategies to reduce the penetration of persons with a mental illness deeper into the system. In addition, the community policing model ushered in a problem-solving approach to the law enforcement response to incidents involving persons with a mental illness. As the final point in the criminal justice system, the correctional system has addressed the burden of managing the proportion of inmates with a mental illness by developing treatment programs and special housing units.

The Memphis Crisis Intervention Team (CIT) Model

One strategy implemented in policing and corrections to improve the criminal justice response to mental illness is the Crisis Intervention Team (CIT) model. In September of 1987, law enforcement officers in Memphis responded to a call for service involving an individual with a history of mental illness. This individual was wielding a knife and threatening to harm himself. The officers demanded that he drop the knife, at which time he ran toward the officers with the knife in-hand. In response to this threat, the officers fired several shots that resulted in the death of the individual. Following this incident, mental health advocates and the general public expressed tremendous concern surrounding the manner in which the police were managing mental health crises in the community. To quell their concerns, the Memphis Mayor established a task force comprised of representatives from law enforcement agencies, the mental health system, advocates, and academic contributors. This collaborative task force sought to develop a program that would effectively reduce the likelihood of injury to the officer and the person in crisis. The additional goals of criminal justice diversion and increasing access to mental health treatment were also on the agenda (Compton et al., 2011).

The Memphis Crisis Intervention Team (CIT) Model emerged as a comprehensive strategy to enhance the criminal justice response to mental health crises. The two defining elements of this program are a 40-hour specialized police-based training curriculum and a community-wide partnership between the criminal justice and mental health systems (Compton, Bahora, Watson, & Oliva, 2008). There are currently over 400 jurisdictions employing the Crisis Intervention Team (CIT) model throughout the country and approximately 1,500 CIT programs

in existence around the world (Compton, et al., 2011). These figures enumerate the widespread adoption and diffusion of this strategy in the field of criminal justice.

The voluntary 40-hour Memphis CIT training program is designed to provide law enforcement officers with the knowledge and skills needed to recognize and manage mental health crises (Compton et al., 2011; Florida CIT Coalition, 2005). This training includes presentations from local mental health providers, legal experts, advocacy organizations, and consumers of mental health services. Officers are also given the opportunity to tour local mental health facilities to gain insight into the functioning of the mental health system in their communities. One additional component of the training involves learning and practicing verbal de-escalation skills that are deemed useful when responding to situations involving persons with a mental illness. The training component of the Memphis CIT model empowers first-responders to resolve mental health crises effectively by diverting individuals into a treatment setting as opposed to the traditional criminal justice setting, when appropriate (Compton, et al., 2011).

While the training program was originally intended solely for street-level law enforcement officers, correctional officers and other first-responders are now being integrated into the training classes. Of particular importance for the present study is the decision to provide CIT training to correctional officers to address the continual flow of inmates with mental illnesses and the accompanying prevalence of mental health crises in these institutions. With the expansion to the correctional domain, CIT can now be conceptualized as a tool that is being utilized throughout the criminal justice system to improve the system-wide response to persons with serious mental illnesses.

The partnership between community mental health providers and criminal justice agencies serves to facilitate the psychiatric referral process. One key component of this program is the establishment of a 24-hour psychiatric drop-off center that streamlines psychiatric referral. A nationally recognized model of an exemplary psychiatric receiving facility is located in one of the counties included in this study, Orange County, Florida. The Central Receiving Facility (CRC) located at a Lakeside Behavioral Healthcare facility in Orlando, Florida provides law enforcement officers with a single site to take individuals in crisis for psychiatric referral 24 hours a day. It has been lauded for the efficient and effective processing, stabilization, and treatment placement of thousands of individuals that would have otherwise been incarcerated or taken to an inappropriate emergency room setting (National Institute of Corrections, 2007).

According to the 2011 CRC annual report, the crisis center has served over 37,000 mental health consumers since it opened in 2003. In addition, an estimated 2,600 people have been diverted from the local jail setting, resulting in a cost savings of roughly 1.2 million dollars in avoided days of incarceration (CRC Annual Report, 2011). The Central Receiving Facility has provided Orange County with a cost-effective alternative to incarceration and law enforcement officers specifically with an expedient and humane avenue for psychiatric referral. These elements of the CRC make it a very important feature in the Crisis Intervention Team model in this jurisdiction. As such, it has become a model for other counties to follow when developing a plan of action for the construction of a psychiatric receiving facility (National Institute of Corrections, 2007).

The number of psychiatric receiving facilities in a specific region varies based upon the size of the jurisdiction and the available community resources. In communities where resources

are scarce, memorandums of understanding have been established with local hospitals to give law enforcement officers priority when making psychiatric referrals. Diminishing the complexity of the psychiatric referral process encourages officers to transport persons with a mental illness to drop-off centers as opposed to placing them under arrest. The training and the community partnership components of the Memphis CIT model work concomitantly to improve the criminal justice response to mental health crises and forge a pathway to psychiatric treatment (Compton, et al., 2011).

Existing Literature on the Memphis Crisis Intervention Team (CIT) Model

Prior research surrounding the Memphis Crisis Intervention Team (CIT) model has focused almost exclusively on the effectiveness of this program within the law enforcement setting. According to Compton et al. (2011), the existing literature can be consolidated into three main categories: 1) officer-level outcomes, 2) disposition of CIT calls, and 3) mental health referral characteristics and outcomes. The officer-level studies have evaluated the extent to which the program is effectively achieving the objectives of the 40-hour training curriculum. According to the Florida CIT Coalition (2005), the first goal of CIT training is to increase officer knowledge of mental illnesses and available community resources. An additional goal of the training is to increase officers' confidence in managing incidents involving a person with a mental illness. Thirdly, the training is intended to provide officers with verbal de-escalation skills that they can use in the future to effectively diffuse a mental health crisis. Reduced use of force and decreased incidence of officer and subject injuries are also desired outcomes of CIT training (Compton, et al. 2011).

One of the most important goals of the Memphis CIT model is related to the preferred disposition of calls for service involving persons with a mental illness. The criminal justice diversionary element of the CIT program seeks to increase officers' utilization of the psychiatric referral process and decrease their tendency to arrest persons with a mental illness. In addition, a long-term objective of the Memphis CIT model is improved mental health outcomes for persons with a mental illness encountering law enforcement (Compton, et al. 2011). However, tracking these individuals through the mental health system and measuring mental health outcomes is a daunting task. Thus, researchers evaluating this objective of the CIT model have focused on comparing the characteristics of mental health referrals initiated by CIT officers to those initiated by other sources to identify the extent to which these officers are appropriately referring individuals with a mental illness to treatment.

Officer-Level Studies

With regard to the officer-level outcomes of CIT training, Hanafi, Bahora, Demir et al. (2006) conducted four focus groups in Atlanta, Georgia consisting of a total of 25 CIT-trained officers to examine the impact of the training on their interactions with persons with a mental illness. The officers reported an increase in knowledge and awareness of mental illness as a result of the training. Additionally, the officers conveyed that they utilized the verbal de-escalation skills they acquired in the training, which improved their ability to communicate with individuals in crisis. Overall, the officers in the focus groups reported an increased self-efficacy in recognizing and responding to mental health crises upon completion of the training. Self-efficacy was measured as the degree to which the officers perceived they could effectively manage these calls for service. Increased self-efficacy following CIT training was also reported

among officers included in other studies (Bahora, Hanafi, Chien et al., 2008; Wells & Schaefer, 2006).

Hanafi et al. (2006) also reported that officers experienced a decrease in the stigma they previously associated with mental illness after receiving CIT training. A study conducted by Bahora, et al. (2008) further explored the relationship between CIT training and reduced mental illness stigma among officers. They evaluated this relationship by measuring the social distance reported by officers in their interactions with persons with schizophrenia. Social distance is a form of stigma that measures one's comfort level in terms of how close they are willing to be to a person with a mental illness. Bahora et al. (2008) used vignettes to compare the responses of 40 officers prior to and after receiving CIT training to 34 non-CIT trained officers in terms of their reported social distance when responding to scenarios involving a person with a mental illness. They found that social distance decreased after officers received CIT training. Decreased social distance was also found by Teller, Munetz, Gil, et al. (2006) and Compton, Esterberg, McGee, et al. (2006) in their respective studies of CIT effectiveness.

In 2006, Wells and Schaefer took part in the strategic implementation and preliminary evaluation of a CIT program in Lafayette, Indiana. In a survey distributed to 25 law enforcement officers prior to and following CIT training, they sought to determine whether the training element of the program had reached its intended goals. The immediate training goals were to increase the ability of officers to identify and respond to situations involving a person with a mental illness, in addition to better enabling them to communicate effectively and better understand the dispositional options available to them. According to Wells and Schaefer (2006), there was a statistically significant increase in officers' perceptions of their ability to manage

situations involving persons with a mental illness following their completion of CIT training. In addition, the officers reported an increased understanding of the mental health referral process and the dispositional alternatives available to them when resolving a mental health crisis. Finally, there was a slight increase in officers' perceptions of their ability to communicate with persons with a mental illness and their family members (Wells & Schaefer, 2006).

A study conducted by Compton and Chien (2008) sought to identify predictors of knowledge retention among officers receiving CIT training. Upon completion of CIT training, law enforcement officers in Georgia are required to take a knowledge test. Compton and Chien (2008) duplicated this knowledge test and distributed it to CIT-trained officers within a year of their training. They compared the results of the initial test taken at the end of the training to the results from the follow-up test to determine what factors predicted knowledge retention. They found that the mean test score decreased from 16.7 to 14.7 between the post-training test and the follow-up test. The only statistically significant predictor of knowledge retention was years of police service, meaning the less experienced officers had lower follow-up scores when compared to more experienced officers. These findings suggest that refresher-training courses may have some value in CIT programs (Compton & Chien, 2008).

To examine the use of force among CIT officers in Las Vegas, Skeet and Bibeau (2008) conducted a content analysis of 595 calls for service in which CIT officers were dispatched to the scene. They found that CIT officers only used physical force in 39 (6%) of these calls for service. Only two of those instances in which officers used force resulted in an injury to the subject, three resulted in an injury to the officer, and five resulted in an injury to a third party. These researchers also developed a coding system to measure the violence potential of the

subjects of these calls for service to determine to what degree this played a role in the decision of CIT officers to use force. One key finding related to violence potential indicates that subjects with a known mental health disorder scored lower on the violence potential scale than subjects without a known disorder, challenging the assumption of dangerousness associated with persons with a mental illness. The final conclusion reached by Skeet and Bibeau (2008) suggested that a subject's potential for violence is strongly correlated with the decision to use force among CIT-trained officers.

An additional study, conducted by Morabito, Kerr, Watson, et al. (2010) explored the relationship between CIT training and use of force among law enforcement officers in Chicago. Morabito et al. (2005) conducted interviews with 216 officers in several Chicago districts, in which they asked several questions pertaining to the level of force used in their most recent encounter with an individual with a mental illness. One particular research question of interest was the role of CIT training in the decision to use force. They compared responses among those officers that had received CIT training (n=91) to those who had not received CIT training (n=125). They also measured the relative importance of officer experience and the subject's race, gender, demeanor, level of resistance, and extent of impairment as predictors of use of force. They found a statistically significant relationship between subject resistance/demeanor and the officer's decision to use force. This finding indicates that officers are more likely to use force with suspects that demonstrate a resistant demeanor than with suspects that are compliant with officer demands. They added that CIT trained officers were much less likely to use force as a person became more resistant when compared to non-CIT trained officers. This finding suggests that CIT trained officers may be more patient and tolerant of noncompliant behavior as a result

of their training. However, a convoluted result from this study indicated that officers with CIT training are actually more likely than non-CIT trained officers to report having used force in their most recent encounters with a person with a mental illness (Morabito, et al., 2010).

Compton, Neubert, Broussard, et al. (2011) also conducted a study that examined the comparative use of force among CIT trained and non-CIT trained officers. This study analyzed survey responses from 48 CIT-trained officers and 87 non-CIT trained officers in one urban police department in the southeastern United States. They incorporated demographic characteristics and prior exposure to mental illness as control variables in their statistical models examining the comparative use of force among these two groups of officers. The officers were asked to indicate the level of force they would use to resolve hypothetical vignette scenarios. According to Compton et al. (2011), "CIT-trained officers selected actions characterized by a lower use of physical force than non-CIT trained officers" (pg. 742). In addition, CIT-trained officers had a more favorable perception of nonphysical actions and a less favorable perception of physical action than non-CIT trained officers.

To summarize the officer-level studies, the Memphis Crisis Intervention Team (CIT) model has been linked to reduced stigma associated with mental illness and improved self-efficacy among officers when handling mental health crises (Bahora, Hanafi, Chien, & Compton, 2008; Compton et al., 2006; Hanafi et al., 2008). Additionally, officers receiving CIT training report an increased knowledge of mental illnesses and an enhanced ability to recognize and resolve issues involving a person experiencing a mental health crisis following the training (Compton & Chien, 2008; Hanafi, et al., 2008; Wells & Schaeffer, 2006). The CIT model has also been shown to effectively reduce the use of force and the incidence of officer and offender

injury in mental health crises (Borum, 2000; Compton et al., 2011; Morabito et al., 2010; Skeet & Bibeau, 2008). In addition, the implementation of CIT in certain jurisdictions has decreased the utilization of high-intensity police units (SWAT) (Dupont & Cochran, 2000; Bower & Pettit, 2001).

While the officer-level studies have demonstrated promising findings associated with the implementation of CIT, there are numerous shortcomings of the existing literature on this topic. First, several of the studies included in this section of the literature review utilized vignette scenarios and focus groups, which in terms of methodology, lack rigor and substantive quantitative value. Secondly, most of the studies just cited examined relatively small sample sizes covering a narrow geographical area, thus limiting the generalizability of the findings. In addition, only a select few incorporated a control group or employed a pre/post-test research design, both of which are considered best practices for a program evaluation study. Finally, many of these studies are primarily descriptive in nature, meaning their statistical analysis was limited in scope, with only a few utilizing multivariate analytical procedures.

Disposition of CIT Calls for Service

The second category of existing CIT research concerns the disposition of calls for service involving a person with a mental illness. A study conducted by Teller, et al. (2006) compared the disposition of 10,004 mental health-related calls in the two years prior to and the four years following the implementation of CIT in Akron, Ohio. Among their findings, Teller et al. (2006) reported an increase in the identification of mental health-related calls among dispatchers. In addition, the overall arrest rate of persons experiencing a mental health crisis decreased slightly (3% to 2.9%) following CIT implementation. They also found that CIT-trained officers were

more likely to transport persons with a mental illness to a psychiatric treatment facility, when compared to non-CIT trained officers. There was also a slight increase in the number of voluntary psychiatric transports following the implementation of CIT, indicating improved interactions between law enforcement officers and persons with a mental illness (Teller et al., 2006).

Similar results were reported by Watson, Draine, Kriegl, et al. (2008) in a study examining the disposition of mental health disturbance calls in Chicago, Illinois following CIT implementation in that jurisdiction. As described in the previous section, Watson et al. (2010) conducted interviews with CIT trained and non-CIT trained officers to compare their self-reported disposition of the most recent call for service they responded to that involved a person with a mental illness. In this study, CIT-trained officers were significantly more likely than non-CIT trained officers to initiate a mental health referral. Watson et al. (2008) also reported that officers with prior exposure to mental illness in their personal life and those possessing positive perceptions of the mental health system were more likely to initiate psychiatric referrals. Utilizing data from this same study, Watson, Ottati, Morabito, et al. (2010) reported that CIT training did not seem to have a substantial effect on differential arrest rates among calls for service involving CIT and non-CIT trained officers, meaning there was no distinguishable difference between these two groups of officers in terms of arrest rates.

In a study conducted by Franz and Borum (2010), the dispositions of 1,539 calls for service involving persons with a mental from nine different police agencies in a Central Florida county were examined. They utilized official data and CIT tracking forms from 2001 to 2005 to determine the rate of arrest among this population and the number of arrests prevented by CIT.

The arrest rate was calculated by dividing the number of arrests by the total number of calls for service. The arrests prevented variable was created by reviewing the CIT tracking form to identify the number of cases in which officers indicated that the individual would have been arrested had CIT not been implemented. The number of arrests prevented was divided by the number of total CIT calls for service to get the prevented arrest rate. The arrest rate in this county steadily declined following the implementation of CIT, with a total overall arrest rate of 3% (n=52) for the five-year study period. Conversely, the number of prevented arrests increased gradually over time, with a total of 19% (n=290) arrests that were prevented by CIT implementation.

With regard to the disposition of mental health disturbance calls, research suggests that CIT trained officers are significantly more likely than non-CIT trained officers to initiate a mental health referral (Teller, et al., 2006; Watson, et al., 2008; Watson, et al., 2010). However, there is conflicting evidence surrounding whether or not CIT actually reduces rates of arrest. While Franz and Borum (2010) posit that the implementation of CIT reduces the rate of arrest among persons with a mental illness, other researchers suggest that there is very little difference in arrest rates before and after CIT implementation (Teller et al., 2006). In addition, research suggests that any differential arrest rates among CIT and non-CIT trained officers are miniscule (Teller, et al., 2006; Watson et al., 2008; Watson et al., 2010).

The existing literature surrounding the disposition of calls for service involving persons with a mental illness is limited in number, scope, and consensus. Very few studies exist examining this component of CIT, and there is little agreement among those that have undertaken this endeavor. In addition, the limited use of multivariate models incorporating

potential confounding variables further constricts the quality of the findings generated from these studies. These studies are also focused on narrow geographical areas, limiting the extent to which the findings can be extrapolated to other jurisdictions. Also, none of these studies surveyed officers before and after they receive CIT training to measure any changes in their reported use of arrest and mental health referrals as dispositional alternatives in mental health disturbance calls.

Mental Health Referral Characteristics and Outcomes

The final category of existing literature evaluating the Memphis CIT model includes studies examining the characteristics and outcomes for psychiatric referrals initiated by CIT-trained officers. Studies evaluating this component of this program have thoroughly reviewed medical charts from psychiatric facilities and emergency rooms to determine if psychiatric referral was an appropriate disposition for these individuals. For example, Strauss, Glenn, Reddi, et al. (2005) examined characteristics of 485 psychiatric patients that were brought into an emergency room in Louisville, Kentucky to compare the characteristics and outcomes of those who were brought in by CIT-trained officers to mental health inquest warrant patients and self-referrals. A mental health inquest warrant is a court order initiated by a citizen to bring someone for psychiatric evaluation based on the perceived dangerousness of that individual. Strauss et al. (2005) found that individuals brought in by CIT officers were more likely than the other two groups of patients to be active patients in the local mental health treatment system, however all three groups had similar rates of substance abuse and homelessness.

With regard to the mental health outcomes of these three categories of patients, individuals brought in by CIT officers had lower rates of hospitalization (20.7%) than the other

two groups. It is worth noting that those patients brought in under a mental health inquest warrant had an extremely high rate of hospitalization (71.6%), whereas the routine referrals had a moderate rate of hospitalization (33.3%). In addition, CIT referred patients were more likely than the mental health inquest warrant patients (23% vs. 4.5%) and less likely than the routine referrals (34.6%) to receive an outpatient follow-up referral. Those patients brought in by CIT trained officers were the least likely to refuse treatment (6.6%), when compared to routine referrals (7.7%) and mental health inquest warrant patients (13.4%) (Strauss, et al., 2005). While differences between these three groups existed, they were not statistically significant, aside from the fact that CIT referrals were significantly more likely than the other two groups to receive a diagnosis of schizophrenia. Strauss et al. (2005) reported that based on the similarities between these three groups of patients, the CIT-trained officers appropriately identified persons in need of psychiatric referral.

Broussard, McGriff, Neubert, et al. (2006) replicated this study in a large, urban hospital in the southeastern United States. They reviewed the contents of 300 patient files that were referred by family members, non-CIT trained officers, or CIT trained officers for psychiatric emergency services. They compared these three modes of referral in terms of basic demographics, diagnosis, presenting problem noted on the triage form, and substance abuse. They also compared these three groups of patients on their scores on the Global Assessment of Functioning (GAF) scale that indicates current psychiatric symptoms and functioning. Broussard et al. (2006) found very little differences between these three groups with regard to demographics, except for non-CIT officers were less likely to refer African American patients

when compared to CIT officers and family members, which could be explained by the high saturation of CIT in African-American neighborhoods in this area.

Secondly, patients brought in by both CIT and non-CIT officers were more agitated and appeared more unkempt and bizarre than those brought in by their family members. This reflects the greater likelihood for law enforcement involvement when an individual with a mental illness is displaying maladaptive or incomprehensible behavior in the community. An additional difference between these three groups noted by Broussard et al. (2006) was that patients referred by family members had significantly higher GAF scores than those referred by law enforcement. This indicates that family members have a lower threshold for intervention than law enforcement officers. Overall, there were no significant differences between those patients brought in by CIT trained and non-CIT trained officers, which suggests that CIT training may have little to do with the characteristics and mental health outcomes of members of this sample. However, due to the marked similarities between these three groups of patients it can be deducted that CIT-trained officers do not have a more inclusive or exclusive view of what circumstances require a psychiatric referral than non CIT-trained officers, meaning the training doesn't predispose them to initiate inappropriate psychiatric referrals (Broussard et al., 2006).

Findings from these studies examining the mental health characteristics and outcomes of those diverted through the Memphis CIT model indicate that CIT trained officers are utilizing the psychiatric referral process appropriately. In addition, they are clearly identifying the proportion of calls for service involving a person with a mental illness that need to be resolved through a mental health referral. However, very little information is provided regarding the long-term outcomes of those that are diverted. Such questions remain unanswered surrounding their future

utilization of mental health services or recidivism rates compared to those not diverted to a psychiatric facility. These researchers also opted against employing a comprehensive multivariate analytical strategy to address any confounding variables that could explain the differences between the groups of patients included in the studies. Additionally, while the studies mentioned above were thorough, they only cover two jurisdictions and comprise a limited sample of patients. The two studies just cited represent the dearth of literature evaluating this component of the Memphis CIT model.

CIT in Corrections

As mentioned previously, existing research has focused primarily on the effectiveness of the CIT model within the law enforcement setting. However, in 2004, the National Alliance on Mental Illness (NAMI) partnered with the Maine Health Access Foundation and local officials in Androscoggin County, Maine to launch a pilot study to examine the effectiveness of the Crisis Intervention Team model in the local jail (Public Health Research Institute, 2005). The goal was to determine if the benefits derived from this training program for police officers could also be beneficial for correctional officers in their daily interactions with inmates with mental illnesses. The researchers utilized official reports and focus group data to conduct a process and outcome evaluation of CIT in the Androscoggin County Jail.

The findings from this study provided empirical support for the implementation of this program in jails. Correctional officers expressed an appreciation for the new skills and knowledge acquired through the training. They also indicated that they felt better prepared to handle a mental health crisis within the jail following the training. Additionally, the correctional officers reported an increased use of verbal de-escalation and a decreased use of physical or

chemical force when responding to incidents involving inmates with a mental illness following CIT training (Public Health Research Institute, 2005). Due to the demonstrated success of this study, an expansion project was supported that entailed the implementation of CIT in eight county jails across the state of Maine. The findings of this project provided further support for the utilization of Crisis Intervention Teams in jails, as they replicated the findings stemming from the Androscoggin County Jail study (Center for Health Policy, Planning, and Research, 2007).

These two studies that examined the implementation and effectiveness of the Memphis CIT model in the correctional setting represent the only studies in this setting, to date. While the evaluations just described were rigorous and the findings promising, additional research is needed to explore the relative effectiveness of this model in other jails around the country. The greatest criticisms of the existing body of literature surrounding CIT in the law enforcement and correctional setting are the small sample sizes and the limited geographical area covered in each study. These limitations impede the generalizability of the findings and hinder the utilization of complex analytical strategies.

Summary

In post-industrial society, the criminal justice system has long played a role in the social control of persons with a mental illness. However, the extent to which society has relied upon this formal social control mechanism to intervene and manage this population has evolved over time. Following the deinstitutionalization movement, persons with a mental illness became more visible in communities around the country, and as a result became increasingly subject to criminal justice intervention. Since the early 1960s, the responsibility of intervening and

managing incidents involving persons with a mental illness has largely shifted to the criminal justice system. Heightened arrest and incarceration rates among this population following deinstitutionalization reflect the "transinstitionalization" that has transferred the burden of housing a substantial proportion of this population from psychiatric institutions to correctional facilities.

The impact of deinstitutionalization on the criminal justice system has led to a fundamental philosophical realignment in which the notion of therapeutic jurisprudence has been embraced. Criminal justice diversion represents one approach to therapeutic jurisprudence in which the system is now being utilized as a pathway to treatment as opposed to incarceration for persons with a mental illness. Extensive collaborations have been developed between members of the mental health field and criminal justice practitioners throughout the country to create innovative strategies for addressing mental illness among those coming into contact with the legal system.

The community policing model that emerged in the late 1960s and the resulting problem-solving approaches to policing are the embodiment of therapeutic jurisprudence as they stress the importance of strengthening the relationship between law enforcement and the community by addressing major social problems, such as mental illness. One program that emerged as a result of the community policing movement to improve the law enforcement response to mental illness is the Memphis Crisis Intervention Team model. This model consists of officer training and community partnerships between the criminal justice and mental health systems.

The current study seeks to address several of the shortcomings outlined in this review of the literature. As noted, much of the literature surrounding CIT has focused almost exclusively

on the effectiveness of the training curriculum within the law enforcement setting. The studies that have sought to explore the effectiveness of CIT in the correctional setting have been limited in scope and have chosen not to compare the responses of correctional officers to those of law enforcement officers in the same jurisdiction. The current study will address this gap in the literature by examining the comparative effectiveness of CIT in the law enforcement and correctional setting by relating survey responses of law enforcement officers to those of correctional officers in the same counties. In addition, this study will include respondents from nine counties in Florida to encompass a broad geographical area.

CHAPTER 3: THEORETICAL FRAMEWORK

As mentioned previously, this study takes a dual-pronged approach to examining the Memphis Crisis Intervention Team (CIT) model. The first prong is the evaluation of the effectiveness of the training component of the CIT model. The second prong of the study is the examination of the process by which the model has diffused throughout the field of criminal justice and the extent to which the program has become institutionalized in criminal justice agencies. Each prong of the study employs a unique theoretical framework. The program evaluation piece focuses on Continuous Quality Improvement and evidence-based practices as the theoretical justification and guidance. The diffusion and institutionalization piece couples the idea of a social movement and institutional theory to develop a theoretical framework to guide the identification of factors that prompt agencies to adopt CIT and to measure the impact of program adoption on criminal justice agencies

Program Evaluation Theoretical Framework

As mentioned previously, the forty-hour CIT training curriculum is designed to enhance law enforcement and correctional officers' knowledge and perceptions of persons with a mental illness and available community mental health resources. In addition, the training is intended to provide them with de-escalation skills to improve their ability to intervene and mange incidents involving persons with a mental illness. While previous research has addressed the effectiveness of the Crisis Intervention (CIT) model, particularly within the law enforcement domain, additional research is needed to further explore the effectiveness of CIT in the correctional setting. This study contributes substantially to the existing body of literature by incorporating a

longitudinal panel research design by which law enforcement and correctional officers will be surveyed on the first day of training, the last day of training and one month after the training. This strategy provides a comprehensive understanding of the immediate and intermediate impact of CIT training on individual officers' knowledge, perceptions and skills with regard to managing incidents involving persons with a mental illness.

Program evaluation plays a key role in building an evidence base for institutionalized practices. A program evaluation in social science can be defined as "the use of social research procedures to systematically investigate the effectiveness of social intervention programs" (Rossi, Freeman, & Lipsey, 1999, pg. 4). Rossi et al. (1999) elaborate on the definition to suggest that social science program evaluations should adjust to the political and organizational environments in which the program under study is imbedded. In addition, the purpose of the program evaluation as stated by Rossi et al. (1999) is "to inform social action in ways that improve social conditions" (pg. 20). There are several types of program evaluations, including needs assessments, program theory assessments, process evaluations, and the focus of the present study, impact assessments. An impact assessment gauges the degree to which a program produces its intended outcomes (Rossi et al., 1999). The present study employed an impact assessment technique to examine the extent to which the training objectives of the CIT program are being achieved with regard to officer-level outcomes.

From an organizational perspective, a program evaluation can function as a mechanism of continuous quality improvement (Wilson & Kurz, 2008). Continuous quality improvement (CQI) is a process by which organizations can monitor program performance and organizational processes. The CQI process entails gathering baseline data and tracking the impact of an

intervention or structural change on organizational performance and outcomes. This can also involve the comparison of similar organizations in terms of input, output, and outcomes. When an organization institutionalizes an innovative practice, the organization may undergo changes to its processes and performance. As suggested by Wilson and Kurz (2008), conducting an evaluation of a newly institutionalized practice can provide valuable insight to modify or improve organizational processes or performance. The present study entailed an impact evaluation of the CIT training program in several Florida counties to contribute to the continuous quality improvement process of organizations in these counties.

Evidence-Based Practices

Another important purpose of program evaluation is to provide evidentiary support for institutionalized practices. Since the early 1990s, public sector organizations have experienced heightened pressure to adopt evidence-based practices. Evidence-based practices (EBPs) can be defined as interventions that are consistently supported by scientific evidence to effectively achieve intended outcomes. The term "evidence-based practices" has become synonymous with "what works" in many service delivery fields. The goal of promoting evidence-based practices among public sector organizations is to bridge the gap between science and practice (Taxman & Belenko, 2012). In other words, tying practice to evidence validates organizational action and performance.

In addition, funding has become increasingly linked to the utilization of EBPs, meaning state and federal funding sources are reluctant to award grants and contracts to organizations that have not adopted EBPs in their field. As stated by Taxman and Belenko (2012), "the accepted standard of an EBP is at least two rigorous studies (i.e. randomized designs or high quality quasi-

experimental designs) with similar findings on key outcomes" (pg. 20). However, within the field of criminal justice and other public sector fields, randomized designs are often unethical and impractical, which leaves researchers with the less rigorous quasi-experimental alternatives. Nonetheless, an impact evaluation can be an effective tool for highlighting "what works" in an organizational field.

While the notion of evidence-based practices originated in the field of medicine, it has now been embraced broadly within public sector organizations. The field of policing has embraced the idea of rooting practice in science, which has led to a new philosophy termed "evidence-based policing" (Sherman, 1998). As stated by Sherman (1998), "evidence-based policing is the use of the best available research on the outcomes of police work to implement guidelines and evaluate agencies, units, and officers" (pg. 3). An essential component of "evidence-based policing" is evaluating ongoing operations and practices to guide organizational decision-making.

According to the National Institute of Corrections (2010), evidence should be utilized to inform decision-making throughout the criminal justice system. Four principles underlie the use of evidence to guide decision-making in the field of criminal justice. First, the judgment of criminal justice professionals is improved when evidence is used to inform decision-making. Second, all steps in the criminal justice process provide an opportunity to reduce harm and enhance public safety. Third, better outcomes are achieved when the criminal justice system collaborates with other systems (i.e. mental health system). Finally, the collection, analysis, and use of data and information contribute substantially to continuous quality improvement within the criminal justice system (National Institute of Corrections, 2010). It can be inferred from these

principles that empirical evidence is an important component to effective decision-making and the adoption of appropriate practices throughout the criminal justice system.

While there is some empirical evidence to support the implementation and sustainment of the Memphis Crisis Intervention Team (CIT) training program, the extant research surrounding this practice comprises the weakest level of evidence in the Maryland Scientific Methods Scale (Taxman and Belenko, 2012). This means that only a slight correlation has been identified between CIT training and the intended outcomes. In addition, very little evidence has been provided to support this practice in the field of corrections. This program is a widely institutionalized practice in the field of criminal justice to address mental health cries, as such it should constantly be subject to scientific scrutiny to support or invalidate its continuance.

As mentioned previously, the focus of the present study is to evaluate the effectiveness of the CIT training program in terms of the intended officer-level objectives. According to Kirkpatrick (1970), there are four main steps involved in the evaluation of a training program. First, the reaction of the trainees to the training session should be evaluated. This entails asking them questions pertaining to their perception of the effectiveness and usefulness of the training. The second step involves evaluating the extent to which the learning objectives of the training program are achieved. Kirkpatrick (1970) suggests providing trainees with a knowledge test at the beginning and end of the training to measure knowledge gained. Third, a training evaluation should identify any changes in post-training job behavior that can be attributed to the training. The final key element of a training evaluation involves measuring the tangible results or outcomes of the training program. Most training programs strive to provide trainees with

knowledge to change their behavior in a way that will achieve the desired outcomes of the training program (Kirkpatrick, 1970).

The current study incorporated the four steps of the training evaluation strategy just outlined. This study measured the knowledge gained from CIT training by providing officers with a basic mental illness and mental health resources knowledge test at the beginning and end of the training. Knowledge retention was measured in the follow-up survey by including components of the pre/post knowledge test. Officers were asked a number of questions pertaining to their perceptions of self-efficacy to determine whether the training improves their perceived ability to manage incidents involving persons with a mental illness. Enhanced self-efficacy and improved knowledge of mental illness and mental health resources are two of the desired results of the training program, thus by measuring changes in self-efficacy and knowledge this study addresses one facet of the outcome component of the training evaluation strategy proposed by Kirkpatrick (1970).

Additionally, officers were asked on the pre-test and the follow-up surveys about the disposition of recent calls for service in which they encountered persons with a mental illness to determine if they are more likely to initiate a mental health referral and less likely to arrest following the training. Decreased reported arrests and disciplinary actions and increased reported mental health referrals rates among calls for service involving persons with a mental illness is an objective of the program. In total, this training program evaluation addresses all four components of the evaluation strategy outlined by Kirkpatrick (1970), reaction, knowledge, behavior, and results (outcomes).

Diffusion and Institutionalization Theoretical Framework

The theoretical framework utilized in the second prong of this study frames the diffusion of the Memphis Crisis Intervention Team (CIT) model as a social movement in the organizational field of criminal justice. An organizational field refers to "an arena-a system of actors, actions, and relations-whose participants take one another into account as they carry out interrelated activities" (Davis, McAdam, Scott, and Zald, 2005:10). Organizations comprising an organizational field share norms, values, and goals that are reflective of the broader institutional environment within which they are embedded (Davis, et al., 2005). The purpose of this study is to explore how the CIT model as an innovation has diffused throughout a specific geographical area in the criminal justice field. In addition, this component of the study incorporates tenets of institutional theory to examine the extent to which the program has become institutionalized in criminal justice agencies.

Diffusion of an Innovation within an Organizational Field

The term innovation refers to an idea or program that is new to the person or organization considering its adoption (Lundblad, 2003). An innovation typically arises out of dissatisfaction with existing policies and practices and often represents a potential solution to an existing organizational problem. Once an innovation is deemed successful by one or more organizations within an organizational field, it gains legitimacy and diffusion occurs. According to Oliver (2000), diffusion is "the adoption of a communicable element, symbolic or artificial, over time by decision-making entities linked to some originating source by channels of communication

within some sociocultural system" (pg. 376). Simply stated, diffusion refers to the "adoption patterns of innovations" (Strang & Soule, 1998, pg. 267).

Studies examining diffusion within organizational fields have focused primarily on the agents of change that initiate the creation of an innovation and ultimately facilitate the diffusion process (Strang & Soule, 1998). One set of change agents that prompts the inception of an innovation and sparks the diffusion process are parties external to the organizational field, such as advocacy groups and governmental organizations that have a vested interest in promoting an innovative practice, policy or strategy. These change agents exert pressure on an organizational field to respond to an issue of concern by adopting an innovation (Strang and Soule, 1998).

The second set of change agents operates within an organizational field to facilitate the inter-organizational diffusion of an innovation. These change agents are key leaders in the field that communicate to other well-connected decision-makers the importance of adopting successful innovative ideas and strategies. Weakly connected organizations are also engaged in the diffusion process when they become aware of an innovation and spread the news of the innovation to other weakly connected organizations (Strang and Soule, 1998).

According to Strang and Soule (1998), competition is a driving force of the inter-organizational diffusion process. Organizations within a field tend to compete for resources and as a result are motivated by this competition to adopt the most successful, financially supported strategies. In the public sector, this competition is often linked to the attainment of state or federal funds. Organizations take notice of other organizations receiving state or federal financial support for the adoption of an innovation and decide to do so themselves. Strang and Soule (1998) also suggest that spatial proximity plays a role in diffusion, as organizations close in

geographic location tend to influence one another in terms of practices, policies, and strategies. Thus, the adoption of an innovation by an organization is likely to spread to nearby organizations because they are likely encounter the same problems, compete for the same resources, and experience the same external pressures (Strang & Soule, 1998).

According to Wejnert (2002), three sets of variables determine the process by which an innovation diffuses. The first set of variables consists of characteristics of the innovation. One innovation characteristic that plays a role in the diffusion process pertains to the consequence(s) of its adoption. There are two categorical consequences of innovation adoption, public and private. Typically, innovations with a public consequence have public policy implications, meaning their adoption is intended to address a problem that has broad societal impacts. Conversely, innovations with private consequences are adopted to enhance individual or organizational performance and/or structure. Making the distinction between public and private consequences of an innovation is important because these consequences dictate how the innovation will diffuse and what mechanisms will be engaged to facilitate the diffusion process. For instance, media is a key facilitator for the diffusion of an innovation with a public consequence because it raises awareness of an issue and mobilizes public support or opposition. It is worth noting that many innovations have both public and private consequences, meaning their adoption could potentially benefit the organization and society as a whole (Wejnert, 2002).

According to Wejnert (2002), the second innovation characteristic that determines the complexity of the diffusion process is the cost-benefit ratio of innovation adoption. There are direct and indirect costs and benefits associated with the adoption of an innovation. For instance, if the innovation requires staff training, the organization must set aside resources to

accommodate the training. On the other side of the coin, the long-term cost savings of implementing a new technology could be extremely rewarding for an organization and the improved service delivery could have outstanding social benefits. When making a decision as to whether or not to adopt an innovation, organizational decision-makers must weigh the costs and benefits. Therefore, an innovation with minimal costs and exponential benefits is likely to diffuse at a higher rate than a more costly, less beneficial innovation (Wejnert, 2002).

As mentioned previously, the majority of research surrounding diffusion and institutionalization has focused on the innovators, or agents of change. According to Wejnert (2002), several characteristics of innovators are important factors to consider when evaluating the process of diffusion. The first characteristic relates to the size of both the entity initiating the diffusion process and the adopting entities. The diffusion process will vary based on whether it is occurring at the individual, organizational, or population level. Furthermore, the size of these entities often dictates whether the adoption of the innovation will have private or public consequences, or both. In addition, the familiarity of the innovation to entities considering its adoption is an important diffusion modulator. The more knowledgeable the innovator is about the potential costs and benefits of an innovation, the more timely and confidently they can make the decision to adopt or reject it (Wejnert, 2002).

Another important characteristic of innovators is the socioeconomic conditions under which the diffusion process is occurring. This is particularly concerned with the feasibility of adoption taking into consideration the adopter's resource constraints. The position of the innovator and the adopter in a social network is also an important component of the diffusion process. With regard to diffusion taking place in an organizational field, this would encompass

the integral role of interagency communication and the perceived legitimacy of the innovating organization. Organizations are more likely to adopt innovations suggested by highly regarded members of legitimate organizations, as opposed to innovations being implemented by less established organizations. The pivotal role of communication both within and external to innovating organizations cannot be underestimated, as it is the essential component to the vertical and horizontal transmission of an innovation in an organizational field (Wejnert, 2002).

The final set of characteristics to be taken into consideration relate to the environmental context of the diffusion process. Wejnert (2002) identified four subgroups that comprise the environmental context: 1) geographic setting, 2) social culture, 3) political conditions, and 4) globalization and uniformity. As stated by Wejnert (2002), contextual factors can be considered "externalities" that influence "the adopter's willingness and ability to adopt an innovation" (pg. 311). The geographical setting typically only impacts innovations with private consequences, as it relates to the practicality of adoption with certain ecological characteristics in mind, such as weather, soil, population density, etc. However, as mentioned previously, geographical proximity of potential adopters can facilitate or impede the diffusion process (Wejnert, 2002).

The values, norms, and ideologies of the institutional environment within which adopting entities are embedded may also impact the decision to adopt an innovation. An organization is unlikely to adopt an innovation that conflicts with highly-engrained institutional norms. The political environment under which an innovation is being considered for adoption also plays a role in diffusion. This is particularly important with regard to innovations with public consequences that are accompanied by politically infused rhetoric. Politics pervade every decision a public sector organization makes, without exception. Therefore, the more

controversial an innovation is perceived to be, the less likely it is to successfully diffuse. The final element of the environmental context that influences diffusion is global uniformity. Externalities often exert pressure on organizational fields to adopt institutionalized, standardized practices, so that all organizations begin to resemble one another, and uniformity is achieved (Wejnert, 2002).

The diffusion process consequently promotes cohesion and uniformity among organizations within an organizational field (Strang & Soule, 1998). The homogeneity among organizations that occurs as a result of diffusion can be conceptualized as institutional isomorphism. In institutional theory, isomorphism refers to "a constraining process that forces one unit in a population to resemble other units that face the same set of environmental conditions" (Dimaggio and Powell: 149). In the most basic sense, this means that internal and external pressures influence organizational characteristics and behavior in a way that induces conformity to institutional norms.

The diffusion of an innovation is a complex process that brings about profound changes within organizational fields. There are a multitude of factors that influence the spread of an innovation, including characteristics of the innovation, the change agents, and the environmental context of the diffusion. These variables interact with one another to modulate the duration and extent of diffusion. The culmination of a successful diffusion process results in the institutionalization of the innovation. Institutionalization is often considered the final stage of diffusion (Goodman & Steckler, 1989).

The Institutionalization of a Practice in the Public Sector

According to Goodman and Steckler (1989), institutionalization is "the attainment of long-term viability and integration of programs within organizations" (pg. 57). Existing literature surrounding institutionalization has treated it as both a process and an outcome (Colyvas & Jonsson, 2011). The following analysis of institutionalization will focus on institutionalization as the product of diffusion within an organizational field. Key features of institutionalized practices will be provided. In addition, the broader impact of institutionalization on individual and organizational behavior will be discussed.

While much of the research surrounding the concept of an institutionalized practice lacks clarity and specificity, several components of institutionalized practices are noted throughout the literature. The first feature that is central to institutionalization is persistence (Goodman, Bazerman, & Conlon, 1980; Goodman & Steckler, 1989; Colyvas & Jonsson, 2011). A practice becomes institutionalized when it persists over time, meaning it becomes an ongoing, consistent aspect of the organization. Persistence is linked directly to the second feature of an institutionalized practice, "taken-for-grantedness," which refers to the routine engagement in the practice (Colyvas & Powell, 2006). The routine characteristic of an institutionalized practice reflects its self-reproducing nature, meaning it perpetuates itself by being a taken for granted practice in an organization. As stated by Colyvas and Jonsson (2011), institutionalization results in "the embedding of practices and categories in routines and logic of action that are then largely unquestioned" (pg. 40).

One of the most commonly cited features of an institutionalized practice is legitimacy (Goodman, Bazerman, & Conlon, 1980; Goodman & Steckler, 1989; Colyvas & Jonsson, 2011;

Suchman, 1995). According to Suchman (1995), legitimacy refers to "a generalized perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definitions" (pg. 308). Legitimacy is obtained once a practice gains widespread acceptance within an organizational field. All organizations strive to achieve and maintain legitimacy as a means to ensure survival. Therefore, a practice that is deemed legitimate by leaders of an organizational field will diffuse broadly and become readily institutionalized within adopting agencies (Goodman, Bazerman, & Conlon, 1980).

The key features just outlined represent the identifiable characteristics of an institutionalized practice. A practice is considered institutionalized when it is persistent, routine, and legitimate. Once a practice becomes institutionalized, it is internalized by individuals within the organization. According to Goodman and Dean (1982), the dramatic changes that occur within an organization upon the adoption of an institutionalized practice can be recognized initially at the individual level since organizations are comprised of individual actors. They argue that an institutionalized practice alters an individual's cognitions, behaviors, preferences, norms, and values. To elaborate, they posit that once a practice is institutionalized, the individual actor becomes cognitively aware of its existence, and from this cognition stems a change in behavior to support the practice. This behavior is reinforced by the observance of others engaging in the same behavior, which modifies an individual's preferred behavioral pattern. The norms and values of individuals within the organization then change to sustain the institutionalized practice (Goodman & Dean, 1982).

The conceptual framework provided by Goodman and Dean (1982) of the process by which an institutionalized practice results in behavioral change can be extrapolated to the organizational level, as the organization is a composite of the individuals operating within it. Therefore, the process of institutionalization brings about changes at the individual level that often subsequently impact the broader organizational culture. Katz and Kahn (1978) assert that an organization modifies several elements of its structure to internalize the institutionalized practice. First, the program routines, such as planning, monitoring, and evaluation, are applied to the institutionalized practice. Secondly, the official supports (i.e. policy, procedure, hierarchy, etc.) incorporate the practice. Thirdly, the institutionalized practice receives normative supports, such as sustained staff acceptance and administrative commitment (Katz & Kahn, 1978).

According to Katz and Kahn (1978), the internalization of the institutionalized practice can also be identified by the re-allocation of organizational resources to support the continuation of the practice. Fifth, the organization invests in program maintenance, meaning it assigns staff and materials to sustain the practice. Finally, the institutionalized practice is perpetuated by program growth or differentiation within an organization, meaning that it is modified or expanded to meet the specific goals of the organization. These modifications to the key components of an organization's structure represent the internalization of the institutionalized practice within an organization (Katz & Kahn, 1978). With this being said, the diffusion and subsequent institutionalization and reification of an innovation within an organizational field can have a pronounced impact on the structure and operations of an organization.

Coupling Institutional Theory and Social Movements to Explain Diffusion

Prior research has employed a variety of organizational and sociological theories to explain the dramatic changes that occur within an organizational field when an innovation diffuses. One theoretical approach to explaining this type of organizational change equates this process to that of a social movement within an organizational field. As previously mentioned, an organizational field is comprised of organizations with shared goals, values, and institutional norms. The social movement framework suggests that the diffusion of an innovation represents a social movement that consists of collective action among agents of change within an organizational field (Davis, McAdam, Scott, and Zald, 2005). Furthermore, this social movement (i.e. diffusion) results in profound organizational changes (i.e. institutionalization) that influence the broader organizational field.

Another organizational theory that has been utilized to explain the impact of innovation diffusion on organizations is institutional theory. Institutional theory frames diffusion as an isomorphic process in which organizations within an organizational field begin to resemble one another a result of the diffusion process (Dimaggio & Powell, 1983. This isomorphic process is the product of internal and external institutional pressures. The current study couples institutional theory and the social movement framework to explain the widespread adoption and diffusion of the Crisis Intervention Team (CIT) model in the organizational field of criminal justice. The tenets of institutionalization previously outlined are incorporated to explain the impact of the diffusion of this innovation on individual criminal justice organizations and on the broader organizational field.

Institutional theory was developed in the late 1970s in an effort to explain the homogeneity (i.e. isomorphism) found among similar organizations operating in an organizational field (Dimaggio & Powell, 1983). Prior organizational research primarily focused on providing explanations for the differences found among organizations performing similar functions, while the striking similarities among these organizations were largely ignored. In the early developmental stages of an organizational field, there are vast differences among organizations in terms of structure, policies, and practices. However, over time, they become markedly similar in the manner in which they conduct business. Institutional theory focuses on the processes by which these similarities arise and the pressures that induce organizational change to reflect the broader institutional norms of the organizational field (Dimaggio & Powell, 1983; Scott 1994; Scott 2008; Zucker, 1987).

Institutional Isomorphism

The primary element of institutional theory that is being utilized in the current study to explain the widespread diffusion and institutionalization of the CIT model in the field of criminal justice is the isomorphic process. In the most basic sense, this means that internal and external pressures influence organizational characteristics and behavior in a way that induces conformity to institutional norms. Dimaggio and Powell (1983) identified three mechanisms that operate independently or simultaneously to produce isomorphic organizational change.

The first mechanism is termed coercive isomorphism, which refers to formal and informal pressures both internal and external to the organization that result in an organization adopting an innovative norm, policy, or practice that complies with the expectations of the institutional environment. An example of coercive isomorphism would be a federal or state

mandate regulating certain behavior among members of an organization. Second, mimetic isomorphism occurs when an organization models the behavior of another organization that it identifies as more successful and legitimate. When an organization confronts uncertainty surrounding a particular issue, they may turn to another organization for a potential solution. The final mechanism, normative isomorphism, refers to the induced organizational change that arises from the professionalism of an organizational field. This type of isomorphic change stems from pressure generated by professional associations for organizations to adopt certain standards and policies (Dimaggio & Powell, 1983).

Organizational change within the public sector has increasingly become a subject of interest for scholars over the last few decades (Davis et al., 2005; Frumkin & Galaskiewicz, 2004). In early institutional theory, public sector organizations were primarily considered constituents in the institutional environment inducing change in the nonprofit and business sectors. While they are still perceived as forces inducing change, public sector organizations are now also being conceptualized as the subject of induced organizational change. Frumkin and Galaskiewicz (2004) recently examined public sector organizational change using the institutional isomorphism lens.

In their study, Frumkin and Galeskiewicz (2004) compared the pressure of institutional forces experienced by public sector organizations to those experienced by the business and nonprofit sectors. The variables they used to measure institutional forces included (1) whether or not the organizations were subject to external reviews and licensing, (2) whether or not the organizations belonged to an association of similar organizations, (3) and whether or not the organizations acknowledged the practice of other organizations in the field. They found that the

institutional pressures exerted on public sector organizations were stronger than the others, by which they concluded that public sector organizations are more susceptible to induced isomorphism than the other two sectors. This suggests that it is appropriate to apply the principle of institutional isomorphism to public sector organizations (Frumkin and Galeskiewicz, 2004).

This being said, the concept of institutional isomorphism can be readily applied to the widespread diffusion of an innovation within an organizational field in the public sector. As organizations experience pressure from the institutional environment within which they are embedded, they begin to resemble one another in terms of structure, process, and practice. The diffusion of an innovation in a particular organizational field is an example of an isomorphic process. When multiple organizations adopt an innovation and this innovation gains legitimacy and diffuses throughout the organizational field, isomorphism occurs. Furthermore, isomorphism and the diffusion process it represents are key elements of the institutionalization of an innovation.

Police Agencies as Institutionalized Organizations

According to Langworthy and Crank (1992), police departments are institutionalized organizations, meaning they conform to the values, goals, and strategies that reflect the expectations of the institutional environment within which they are embedded. The institutional environment of police organizations consists of numerous sovereigns or constituents, which are entities outside of the organization that can potentially impact the structure, operations, and survival of institutionalized organizations (Crank & Langworthy, 1992). Institutionalized organizations, such as law enforcement agencies, adopt particular policies and strategies to

maintain legitimacy with their constituents. Therefore, the expectations of constituents define the structure and operations of an institutionalized organization.

As suggested by Dimaggio and Powell (1983), the pressure placed on organizations from constituents often results in institutional isomorphism within an organizational field. An example of isomorphism in the field of criminal justice is the widespread adoption, diffusion, and institutionalization of community policing. Community policing emerged in response to general dissatisfaction with public-police relations. Pressure from community members around the country forced the field of law enforcement to come up with an innovative strategy to address this problem. According to Oliver (2000), community policing has experienced three generations of development: innovation, diffusion, and institutionalization. At its inception, community policing was an ambiguous term that referred to narrowly focused strategies aimed at improving police-community relations. Pilot projects in large urban cities experimented with increasing foot patrol and developing specialized units to address specific social problems in the area. Findings from studies evaluating these projects provided preliminary support for these policing initiatives (Oliver, 2000).

The era of innovation was quickly followed by the era of diffusion in community policing, in which the number of law enforcement agencies reportedly adopting a community policing strategy increased from 300 in 1985 to 8,000 in 1994 (Oliver, 2000). The Violent Crime Control and Law Enforcement Act of 1994 signified that community policing had reached the public policy forefront. This piece of legislation allocated nearly $9 billion federal dollars to local law enforcement agencies interested in implementing or expanding a community policing initiative. What began as an experimental innovation limited to major urban areas with ample

resources expanded to nearly half of all operating law enforcement agencies covering jurisdictions of all sizes within a ten-year timeframe (Oliver, 2000).

Receiving substantial federal state financial support, community policing became an institutionalized practice in law enforcement agencies around the country. Institutionalization in this context refers to the widespread implementation and sustainment of community policing strategies. As noted by Morabito (2010), one key element fostering the institutionalization of this innovation has been the training of officers to enhance their understanding of the community policing model. According to Morabito (2010), the willingness of an organization to invest in the training of officers to support an initiative is a strong indicator of organizational commitment to the implementation of an innovative practice. In addition, she argues that organizational commitment is a key indicator of widespread institutionalization of community policing.

The Social Movement of the Crisis Intervention Team (CIT) Model

The Crisis Intervention Team (CIT) model is a problem-solving strategy that is reflective of the broader community policing movement that has changed the face of policing over the course of the last few decades. Utilizing a framework proposed by Davis et al. (2005), tenets of organizational theory are interwoven to frame the diffusion and institutionalization of CIT as a social movement within the organizational field of criminal justice. Specifically, the principle of institutional isomorphism will guide the discussion of the inter-organizational diffusion of this model.

Davis et al. (2005) assert that broad, sweeping changes occurring within an organizational field that alter the manner in which that field operates or responds to a particular issue can be likened to a social movement. According to Turner and Killian (1972), a social

movement can be defined as "a collectivity acting with some continuity to promote or resist a change in the society or group of which it is a part" (pg. 246). Typically, social movements emerge in a disorganized fashion with indefinite membership and weak leadership in response to dissatisfaction with new or existing policies. As mentioned previously, innovations emerge in quite the same way. A social movement tends to gain momentum as leadership is established and resources are mobilized to support the initiative, which is similar to the diffusion process (Echterling & Wylie, 1981).

When partnering organizational theory with the social movement perspective to explain major changes taking place within an organizational field, Davis et al. (2005) identified three primary elements that link these two bodies of literature. First, virtually every organizational theory contains "institutional actors." These actors are individuals or groups of individuals operating within an organization that either shape the policies governing the organization or embody the institutional norms of the organization. From the social movement perspective, these institutional actors can be perceived as "mobilizing structures" or facilitators of change within an organizational field (Davis et al., 2005).

The second component of organizational theory that can be intertwined with social movements is "institutional logics," which reflect the missions, goals, and belief systems of organizations. When incorporating this into the social movement paradigm, the "framing process" represents the change that occurs in terms of organizational values and norms in accordance with societal demands and pressures both internal and external to the organizational field. The final element of organizational theory that relates to social movements is the concept of "governance structures," which refers to the formal and informal systems that serve as

regulatory mechanisms within organizations. These relate to the "political opportunities" that exist in the social movement perspective, which "stress the presence of opportunities afforded by weaknesses, contradictions, or inattention by governing authorities" (Davis, et al., 2005: 17).

Davis et al. (2005) developed a theoretical framework consisting of several principles that elaborate on the concepts just outlined. The current study applies this framework to explain the diffusion of the CIT model. When utilizing this framework, the unit of analysis is the organizational field, which for the purpose of this study is the field of criminal justice. The first principle to be considered is that any social movement within an organizational field involves three sets of field actors: dominants, challengers, and governance units. Each group of actors is embedded within the organizational field of study. It is worth noting, that change agents from outside of the organizational field also serve to facilitate diffusion. These agents represent the external social environment, which will also be discussed in this section. With regard to organizational field actors, the dominant actors are the individuals or groups that drive the organizational field. With regard to the innovation and diffusion of CIT within the field of criminal justice, the dominants would be the leaders of law enforcement and correctional professional associations that have embraced and promoted the CIT model. These actors play a powerful role in the development of institutional norms, as they set the standard for acceptable practices within the field.

According to Davis et al. (2005), challengers are individuals or groups that contest a policy or practice within an organizational field. The challengers that have facilitated the diffusion of CIT are officers or supervisors within criminal justice agencies that recognize the inadequacy of their departmental response to persons with a mental illness and challenge their

department to adopt an alternative strategy. As mentioned earlier in the discussion of institutional isomorphism, organizations looking for solutions to problems turn to other organizations for innovative solutions. Law enforcement or correctional agencies striving for an improved response to persons with a mental illness recognize the successes of CIT in other agencies and initiate the implementation of this model.

Thirdly, the governance units are those individuals and groups that exercise power and authority over the organizational field (Davis, et al., 2005). One group of governance units that has facilitated the diffusion of CIT is the dominant group previously described. Leaders within law enforcement and correctional agencies and the professional associations which they comprise have the authority to set standard operating procedures for these agencies and consequently alter the norms and accepted practices of an organizational field. The widespread diffusion of an innovation fostered by pressure from professional organizations is an example of normative isomorphism, in which pressure to adopt institutional norms drives the diffusion process.

Other governance units that have played a role in the diffusion of CIT are private and public funding agencies that have financially supported the implementation and sustainability of CIT within law enforcement and correctional agencies. Support from funding agencies often drives decision-making and policymaking at the organizational level in the sense that where the money leads the organizations will follow. The judicial arm of the criminal justice system also has the authority to regulate the behavior of organizations within the system. However, this governance unit has not played a substantial role in the diffusion of CIT, although members of the judicial branch have expressed their support of this initiative.

The interaction between institutional actors plays a pivotal role in the diffusion of an innovation. As mentioned previously, the dominants, or leaders in the field act as "mobilizing mechanisms" that foster a social movement within an organizational field. With regard to the diffusion of CIT, the dominants and challengers act as change agents to facilitate the diffusion process. Through inter-organizational communication among members of professional associations, this innovation has gained legitimacy and diffused broadly, thus representing a social movement in the field of criminal justice. Furthermore, communication between organizational leaders facilitates mimetic isomorphism, as agencies learn from one another about innovative solutions to their problems (Davis et al., 2005; Dimaggio & Powell, 1983; Duffee & Maguire, 2007). One method by which law enforcement and correctional administrators learn about cutting edge practices is through professional trade magazines that are published by leading professional associations. The Crisis Intervention Team (CIT) model has made at least one appearance in both Corrections Today and the FBI Law Enforcement Bulletin, which has promulgated the program and given it greater legitimacy in the field of criminal justice (Bower & Pettit, 2001; Hodges, 2010).

The second principle proposed by Davis et al. (2005) that must be taken into consideration when examining a social movement within an organizational field is the powerful influences exerted on organizations from the external social environment within which they are embedded. The external social environment consists of external actors and external governance units. External actors are individuals or groups that induce change from outside the field and external governance units are governance structures that operate outside the organizational field

but impact the broader social or institutional environment within which the field is imbedded. This external social environment represents the environmental context in the diffusion literature.

External actors often play a role in the creation of an innovation, as was the case for CIT. The National Alliance for Mental Illness (NAMI), a mental health advocacy group, exerted pressure on law enforcement agencies in Memphis to develop an innovative strategy to respond to the mishandled incident that resulted in the fatality of a person with a mental illness. The pressure from this group of external actors led mental health and criminal justice leaders in Memphis to convene a task force that ultimately created the Memphis CIT model. In addition, the continued pressure from local NAMI groups has prompted the implementation of CIT in agencies around the country, thus facilitating the diffusion of CIT. Furthermore, communication with mental health providers has also played a role in the adoption and diffusion of CIT. The impact of external actors on the diffusion of an innovation is considered coercive isomorphism in institutional theory, which refers to the widespread uniformity found among organizations within an organizational field induced by external forces.

The third principle of the framework laid forth by Davis et al. (2005) is institutional logics, which as previously mentioned refer to the institutional norms and values of a particular organizational field. These norms and values fluctuate based on the external social environment and shift accordingly with the philosophical underpinnings of the organizational field. With the introduction of therapeutic jurisprudence and community policing, the norms and values of the criminal justice field as it responded to persons with a mental illness became increasingly aligned with notions of rehabilitation and treatment as opposed to punishment and incarceration. Therefore, the innovation and diffusion of CIT represents a normative shift in the field that

stresses the importance of utilizing agents of the system to divert individuals with a mental illness into treatment and away from jails and prisons.

With regard to the fourth principle of the social movement and organizational theory paradigm, Davis et al. (2005) argued that organizations have a tendency to promote "institutional settlement," meaning they prefer stability and support the maintenance of status quo. However, when a destabilizing event or process occurs, the organizational field may be required to evaluate the current state of affairs. The fatal policing shooting of a person with a mental illness represents the destabilizing event that prompted the reevaluation of the manner in which law enforcement agencies were responding to incidents involving persons with a mental illness.

In response to a destabilizing event, "reactive mobilization" occurs, which is the fifth principle of this framework. This entails a change in the way in which the organizational field operates or addresses a particular issue. According to Davis et al. (2005) there are three mobilizing mechanisms that drive this reactive change within an organizational field. The first mechanism is "attribution of threat or opportunity," which simply means the field must determine whether the destabilizing event poses a threat or opportunity to the field, or both. Once the nature of the destabilizing event has been established, the second mechanism is enabled, which entails establishing a new institutional logic to reflect the organizational field change, a term called "social appropriation" (Davis, et al., 2005, pg. 18). The third mobilizing mechanism is the inclusion of "new actors and innovative action" to address the threat or opportunity for change within the organizational field. If all three mobilizing mechanisms are triggered, the field dominants and challengers will collaborate to develop strategies to address the destabilizing

event in such a way that a "shift in the strategic alignment" of the field will occur and a new "institutional settlement" will emerge (Davis, et al., 2005: 18).

The Crisis Intervention Team (CIT) model represents an innovation that emerged to change the way law enforcement officers intervene and manage mental health crises. Incidents similar to the fatal police shooting that prompted the initial implementation of CIT have occurred in communities around the country. In addition, ill-handled incidents involving inmates with mental health issues have led to the diffusion of this model to the correctional domain of the criminal justice field. Therefore, it can be said that destabilizing events have played a distinct role in the diffusion of this innovation throughout the field of criminal justice.

In an effort to examine the process by which this program has diffused throughout the Florida counties included in this study, surveys were distributed to representatives of law enforcement and correctional agencies familiar with the CIT program in their agency. Specifically, the representatives were asked to indicate whether a destabilizing event, interagency communication and/or external forces prompted their agency to adopt the CIT model. This survey also assessed the degree to which the CIT model is institutionalized in the agencies included in the sample. One key indicator of institutionalization that was captured on this survey was perceived legitimacy of the CIT program. Agency representatives were also asked a series of questions pertaining to changes that have occurred within their agency to internalize CIT as an institutionalized practice.

This study postulates the diffusion and institutionalization of CIT represents a social movement that transformed the manner in which the criminal justice system responds to persons with a mental illness. This model has become a widely embraced strategy among criminal justice

agencies. As such, many of these agencies have begun to resemble one another in practice, policy, and procedure with regard to their response to this social problem. Thus, the diffusion of this innovation in the field of criminal justice reflects the principle of institutional isomorphism, as the tenets of CIT become internalized within these agencies and their structures are modified similarly to sustain the Crisis Intervention Team (CIT) model.

Summary

The present study takes a dual-pronged approach to examining the Memphis Crisis Intervention Team model. The theoretical framework for the program evaluation component of the study is grounded in the furtherance of Continuous Quality Improvement and evidence-based practices. While empirical evidence exists surrounding the effectiveness of the Memphis Crisis Intervention Team (CIT) training program, prior studies have consisted primarily of observational research, qualitative focus groups, and quasi-experiments. According to Taxman and Belenko (2012), these methodological approaches barely meet the bronze standard of evidence meaning the findings derived from these studies culminates in weak evidentiary support for the CIT model. By incorporating a more sophisticated methodology and advanced statistical analytical procedures, the current study seeks to enhance the evidence-base surrounding this widely accepted practice.

The second aspect of the study incorporated tenets of organizational theory to frame the diffusion of the CIT model as a social movement in the criminal justice field. In addition, this aspect of the study measured the extent to which the CIT model has modified organizational structure among adopting agencies to examine institutionalization of the model. While only minimal evidence exists supporting the effectiveness of the model, it has diffused rapidly and has

been widely adopted by criminal justice agencies. Crank and Langworthy (DATE) suggest the widespread diffusion of a model that has gained legitimacy but has not necessarily been proven effective can be conceptualized as the perpetuation of an "institutional myth." An institutional myth is a policy or practice that is broadly accepted by leaders in an organizational field as truth, or the appropriate response to a particular issue. The framework tested in the current study conceptualizes the diffusion of the CIT model as a social movement that has been largely perpetuated by the belief that it is effective, rather than knowledge of its true effectiveness.

The current study takes a unique approach to evidence-based practices research by not only examining the effectiveness of a program but also identifying factors that facilitate the diffusion of the same program and measuring the impact of program adoption on organizational structure. As just mentioned, the two key components of the study include a program evaluation of the CIT training program and an exploratory piece focused on the diffusion and institutionalization of the model. This study employed a mixed-methodology research strategy to answer the following research questions:

1) Does the CIT training curriculum achieve the intended officer-level objectives?
2) What factors facilitate the diffusion of the CIT model throughout the counties included in the study?
3) To what extent has the CIT model become an institutionalized practice in law enforcement and correctional agencies included in the sample?

The methodological and analytical strategies for the program evaluation piece were entirely separate from the diffusion and institutionalization piece. Therefore, the methodology and results sections for the program evaluation piece are contained in Section A that follows,

while the methodology and results sections for the diffusion and institutionalization component of the study are presented in Section B. This document concludes with a discussion section that combines both components of the study, which outlines the limitations of the study and provides future directions for research on this topic.

CHAPTER 4: METHODOLOGY AND RESULTS SECTION A-PROGRAM EVALUATION COMPONENT

Research Questions and Hypotheses

The program evaluation component of this study measured the extent to which the CIT training program is achieving the intended officer-level objectives among both law enforcement and correctional officers. To answer this question, the following hypotheses based on the training objectives laid forth by the Florida CIT Coalition were tested:

H1: CIT training will increase officers' knowledge of mental illness.

H2: Officers' knowledge of mental health resources in the community and the mental health referral process will increase upon completion of CIT training.

H3: Officers will experience an increase in their perceived level of self-efficacy when managing mental health crises upon completion of CIT training.

H4: Officers' perceptions of verbal de-escalation will be enhanced as a result of CIT training.

H5**:** CIT training will improve officers' perceptions of the mental health resources in the community and the mental health referral process.

H6: Officers will report a decrease in arrests or disciplinary actions and an increase in mental health referrals in the disposition of mental health calls for service following their completion of CIT training.

The first five hypotheses were assessed in the same manner for both law enforcement and correctional officers. The questions included on the surveys pertaining to the final hypothesis were different for law enforcement and correctional officers. While one of the original goals of

the Memphis CIT model was decreased arrests and increased mental health referrals, this objective only pertains to law enforcement officers. Guidelines specifying the desired outcomes for incidents involving persons with a mental illness in a correctional setting have yet to be established. However, correctional officers were asked to specify the extent to which they rely on mental health referrals compared to some form of disciplinary action when resolving incidents involving inmates with a mental illness.

There are several unique aspects of the current study. While prior research has explored the extent to which the CIT training program achieves its objectives among law enforcement officers, this study also examined the effectiveness of the training among a sample containing correctional officers. In addition, prior research has been limited to measuring only one or two of the training objectives within a single geographical location. By including officers from several counties and numerous training objectives, the current study addresses these shortcomings. This study also contributes to the literature by examining the relationship between officers' demographic characteristics and training effects. Theoretically, the incorporation of demographic variables is essential to controlling for possible mediating or confounding variables when examining the effectiveness of a training program. Therefore, the present study involves a more extensive evaluation of the CIT training program than attempted previously and provides a comprehensive picture of program effectiveness.

Research Design

The program evaluation component of the study utilized a panel research design with three data collection points: 1) pre-test (first day of the training), 2) post-test (last day of training), and 3) follow-up (one month upon completion of the training). These surveys are

located in Appendix A. According to Kirkpatrick (1970), the before-and-after approach to program evaluation is the most effective method for gaining insight into the true effectiveness of a training program. This research design sheds light on the extent to which the training is achieving its intended objectives by comparing the baseline scores on the variables of interest at the pre-test to scores on the posttest and follow-up questionnaires to measure any changes in responses that can be attributed to the training program.

For the pre and posttest data collection points, paper questionnaires (PAPI-Pencil and Paper Interview) were distributed in-person to all of the officers attending the training sessions on the first and last days of the training. The initial survey included seven main sections: 1) demographics, 2) basic knowledge of mental illness, 3) perceptions of self-efficacy, 4) perceptions of verbal de-escalation, 5) perceptions of community mental health resources and the mental health referral process, 6) knowledge of community mental health resources and the mental health referral process, and 7) nature and extent of recent encounters with persons with a mental illness and preferred resolution of these encounters (law enforcement officers-mental health referral vs. arrest) (correctional officers-mental health referral vs. disciplinary action). This survey also contained questions pertaining to how they first learned about CIT, what prompted them to attend the class, their prior exposure to mental illness and previous mental health training. The survey administered at the conclusion of the training included sections two, three, four, five, and six from the initial survey.

A follow-up survey was constructed using the online survey (CASI-Computer Assisted Self-Interview) development software Qualtrics. A link to this survey was distributed via email to officers that responded to the previous surveys one month after they completed CIT training.

The follow-up questionnaire included sections two, three, four, five, six, and seven from the initial survey. As mentioned previously, measuring scores on the variables of interest at the beginning and end of the training provides an accurate picture of the extent to which the training is achieving its initial objectives (Kirkpatrick, 1970). The variables of interest expected to increase between the pre-test and posttest based on the CIT training objectives include:

- Basic knowledge of mental illness
- Perceptions of self-efficacy
- Perceptions of verbal de-escalation
- Perceptions of community mental health resources and mental health referral process available mental health
- Knowledge of community mental health resources and mental health referral process

This study also tests whether there is any decline between the posttest and follow-up data collection points on these variables of interest. With regard to the final hypothesis, there is an expectation of change in the manner in which law enforcement and correctional officers respond to calls for service involving persons with a mental illness between the pre-test and follow-up data collection points. It is hypothesized that once completing CIT training, officers will be more likely to initiate a mental health referral and less likely to arrest or initiate disciplinary action when responding to mental health crises.

Measures

Knowledge of Mental Illness (H1) and Mental Health Resources & Referral Process (H2)

The assumption underlying the importance of knowledge acquisition in a training program is that enhanced knowledge will improve on-the-job performance among those receiving the training. Among the goals associated with knowledge acquisition with regard to performance is the automatic application of acquired knowledge in the performance of duties associated with the knowledge gained (Kraiger, Ford, & Salas, 1993). An effective training program provides trainees with knowledge that enhances their cognitive response to the on-the-job situations by drawing on the knowledge gained from the training to improve their response to these situations (Kraiger, Ford, & Salas, 1993). The CIT training program intends to provide law enforcement and correctional officers with knowledge about mental illness (H1) and available community mental health resources and the mental health referral process to improve their response to mental health crises.

Questions two, three, four, six, and eight were derived from the CIT training curriculum in Orange, Osceola, and Hillsborough Counties in Florida, while questions one, five, and seven were taken from the questionnaire utilized in the evaluation of the CIT training program for correctional officers in several counties in Maine (University of New England Center for Health, Policy, Planning, and Research, 2007). The correct answers to the first four questions, and the second to last question are true. The correct answers to the remaining questions are false. Officers were given the option of "Don't Know" because this is a valid answer that may identify their lack of knowledge regarding mental illness at any data collection point. It is hypothesized

that there will be an increase in correct responses following the training. The following questions from the pre/post/follow-up questionnaires are intended to measure any changes in officers' knowledge of mental illness that can be attributed to the CIT training program:

Statement	True	False	Don't Know
1. When someone has a mental illness, their brain is impaired in a way that affects their behavior and emotions.			
2. An individual with a developmental disorder is likely to respond to a command differently than an individual with a mood disorder.			
3. Schizophrenia is a mental illness that is often accompanied by hallucinations.			
4. An individual with bipolar disorder is sometimes unpredictable because their mood fluctuates between depression and mania.			
5. One of the main causes of mental illness is a lack of self-discipline and will-power.			
6. A person with a mental illness is more dangerous than a person without a mental illness.			
7. When an individual is paranoid and believes that everyone is out to get them, it is best to play along with them to get them to do what you want.			
8. If a person is threatening to harm themselves or others, it is best to approach them with an aggressive response.			

Figure 1: Survey Excerpt-Knowledge of Mental Illness Questions

The responses to these knowledge based questions were coded as follows: 1= correct, 0= either incorrect or don't know. A summed variable comprised of the aggregated responses to these eight questions was created to identify changes in knowledge between the pretest, posttest, and follow-up data collection points. Therefore, in the analytical procedures, "Knowledge of Mental Illness" is represented by a summed variable with a range of 0-8, with 0 being no correct answers and 8 being all correct answers. The purpose of creating this summed variable is to differentiate between those that scored lower and those that scored higher on the knowledge-based questions at all three time points.

To measure officers' knowledge of the mental health referral process and available mental health resources, officers were asked two separate questions on the pretest and posttest surveys based on a 5-point Likert-type scale (Strongly Disagree=0, Disagree=1, Neutral=2, Agree=3, Strongly Agree=4). First, they were asked to indicate to what degree they are familiar with the Baker Act (i.e. Florida's involuntary mental health referral process). Secondly, they were asked to indicate how knowledgeable they are about the available mental health resources in their community. These questions stemmed from questions utilized by Wells and Schafer (2006) in their evaluation of the CIT training program in West Central Indiana. The assumption underlying knowledge acquisition with regard to mental health resources and the mental health referral process is that the officers will move up the scale of agreement at the posttest data collection point. The responses to these questions were analyzed separately with a range of possible scores between zero and four. At the follow-up data collection point, officers were asked to indicate their perception of whether the knowledge obtained in CIT training improved (coded=1), worsened (coded=-1) or had no effect (coded=0) on their ability to recognize when a Baker Act should be initiated and their understanding of the entire mental health referral process. The questions included on the follow-up questionnaire pertaining to the impact of CIT training on officers' knowledge of the mental health referral process were created specifically for this study.

Self-Efficacy and the Management of Mental Health Crises (H3)

Self-efficacy is defined as "a personal judgment of how well one can execute a course of action required to deal with prospective situations" (Stajkovic & Luthans, 1998, pg. 240). Research suggests that self-efficacy is strongly related to on-the-job performance in the

organizational setting, meaning that an individual's perception of their ability to do their job is directly related to their actual ability to carry out job-related activities (Stajkovic & Luthans, 1998). As this relates to training, enhancing trainees' self-efficacy serves the important purpose of improving their job performance. One objective of CIT training is to increase officers' self-efficacy with regard to the intervention and management of mental health crises, thereby increasing their ability to manage these situations. To examine the extent to which the training is achieves this objective, the following questions were asked of officers at all three data collection points:

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. I am confident in my ability to recognize signs and symptoms of mental illness among individuals that I encounter in the community.					
2. I know how to effectively communicate with persons displaying signs of a mental illness.					
3. I am comfortable interacting with persons displaying signs of a mental illness.					
4. I am confident in my ability to defuse aggression before it becomes violence (verbal de-escalation).					
5. I feel well-prepared to respond to an incident involving a person engaging in self-harming behavior or threatening suicide.					
6. I possess the skills needed to effectively manage any type of mental health crisis.					

Figure 2: Survey Excerpt-Self-Efficacy Questions

Questions one and four in this section were derived from the Maine CIT expansion project (UNE Center for Health, Police, Planning, and Research, 2007). In this section, questions two, three, and six stem from questions contained in the questionnaire employed by Wells and Shafer (2006), while question five is original to this study. By measuring changes in self-efficacy, this study seeks to examine whether officers experience an increase in

their perceived ability to respond to situations involving persons with a mental illness as a result of attending CIT training, which can be translated to improved job performance with regard to managing these situations.

A composite measure comprised of the aggregated responses to the six questions listed above was created to represent self-efficacy at each data collection point. The internal consistency among these questions was high (Cronbach's α=.878). The responses to each question were coded as follows: Strongly Disagree=0, Disagree=1, Neutral=2, Agree=3, Strongly Agree=4. When the responses were summed for the "self-efficacy" composite variable, the scores ranged between zero and twenty-four. The summation of the responses to these individual questions allows the distinction to be made between officers with lower overall perceptions of self-efficacy and those with higher perceptions of self-efficacy across the three data collection points.

Perceptions of Verbal De-Escalation (H4) & Mental Health Resources & Referral Process (H5)

Perceptions and attitudes are important indicators of decision-making and behavioral change. The theory of planned behavior asserts that an individual's behavior is driven in part by their attitudes, beliefs, and perceptions of that behavior (Ajzen, 1991). The more favorable the attitude toward the behavior, the more likely the individual is to engage in that behavior. The present study seeks to examine officers' perceptions of verbal de-escalation techniques (H4) and community mental health resources and the mental health referral process (H5). CIT training intends to improve their perceptions of verbal de-escalation to increase their utilization of these skills. In terms of the mental health referral process, the assumption is that if officers adopt a more favorable perception of this process and the services provided through the referral process, they will be more willing to initiate this process.

The set of questions intended to measure their perceptions of verbal de-escalation techniques in the pre and posttest are as follows:

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. In general, it can be advantageous to use verbal de-escalation skills versus physical intervention when responding to persons displaying signs of a mental illness.					
2. I am comfortable using verbal de-escalation as opposed to physical force when responding to persons displaying signs of a mental illness until I feel my safety is threatened.					
3. The type of intervention skills (i.e. verbal de-escalation or physical force) used can impact the intensity and duration of incidents involving a person displaying signs of a mental illness.					

Figure 3: Survey Excerpt-Perceptions of Verbal De-Escalation Questions

The responses to these three questions (Chronbach's α=.826) were summed to create a composite variable that represented "Perceptions of Verbal De-escalation" for the three data collection points. The responses were coded in the same fashion as the other Likert-type questions utilized in the study, with Strongly Disagree being zero, and Strongly Agree being equal to four. Therefore, the range of possible scores on the composite measure "Perceptions of Verbal De-escalation" ranged between zero and twelve. Again, the purpose of aggregating these questions to create a summed composite variable is to discriminate between those with lower perceptions of verbal de-escalation and those with higher perceptions of verbal de-escalation across the three time points. It is hypothesized that officers will more strongly agree with these statements at the posttest (i.e. have a higher score) if the training improved their perceptions of verbal de-escalation skills.

The following questions are included in the pre and posttest questionnaires to measure officers' perceptions of the mental health referral process and community mental health resources:

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. The mental health services available in my community effectively meet the needs of persons with a mental illness.					
2. I am satisfied with the mental health referral process in my community.					
3. I am satisfied with the options that are available to me when resolving a mental health crisis in the community.					

Figure 4: Survey Excerpt-Perceptions of Mental Health Referral Process and Community Resources

All of the questions contained in this section were derived from the evaluation of the CIT program in Indiana conducted by Wells and Shafer (2006). Similar to the composite measures of "Self-efficacy" and "Perceptions of Verbal De-escalation," these questions were aggregated into a composite variable (Cronbach's α=.808) to represent "Perceptions of Mental Health Resources in the Community and the Mental Health Referral Process." Officers were asked these questions on the first and last day of the training to determine if the training improved officers' perceptions of the available mental health resources and the mental health referral process, thereby increasing their likelihood of using this process and encouraging the utilization of these services. On the follow-up survey, officers were asked whether they perceived CIT training improved (coded= 1), worsened (coded= -1), or had no effect (coded= 0) on their perceptions of mental health services in their community. Officers were also asked to indicate whether CIT training improved (coded= 1), worsened (coded= -1), or had no effect (coded= 0) on their understanding of the Baker Act,

which was utilized as a proxy measure for "Perceptions of Mental Health Referral Process" on the follow-up survey.

Nature, Extent, and Disposition of Mental Health Crises (H6)

One key objective of the CIT model is to increase mental health referrals and decrease arrests among persons with a mental illness. To measure the extent to which CIT training is contributing to criminal justice diversion, law enforcement officers were asked several questions pertaining to the nature and extent of their encounters and interventions in situations involving persons with a mental illness. These questions did not include a caveat neutralizing the seriousness of the crime (or jail incident), therefore; the numbers provided summarize the overall reported frequencies of arrests (disciplinary action) and mental health referrals regardless of seriousness of offense (or jail incident). The questions presented below were included on the pretest survey to establish a baseline and again on the follow-up survey to measure any changes in preferred disposition of mental health calls for service between the pre-test and follow-up data collection points that could be attributable to CIT training. The officers were asked to provide a number for each space provided, and these numbers were summed to create a "total number of encounters" and a "total number of interventions" for law enforcement officers and correctional officers at both time points.

Within the last month, how many times have you encountered a person displaying signs of a mental illness in the following situations?

_____As a victim of a crime

_____As a witness to a crime

_____As a suspected offender

_____As a subject of a call for assistance

_____As a subject that is posing a danger to themselves or others

Within the last month, how many times have you formally intervened with a person displaying signs of a mental illness while on duty? _____

a. How many of these interventions have involved the removal of a person displaying signs of a mental illness from a situation without an arrest or mental health referral?_____

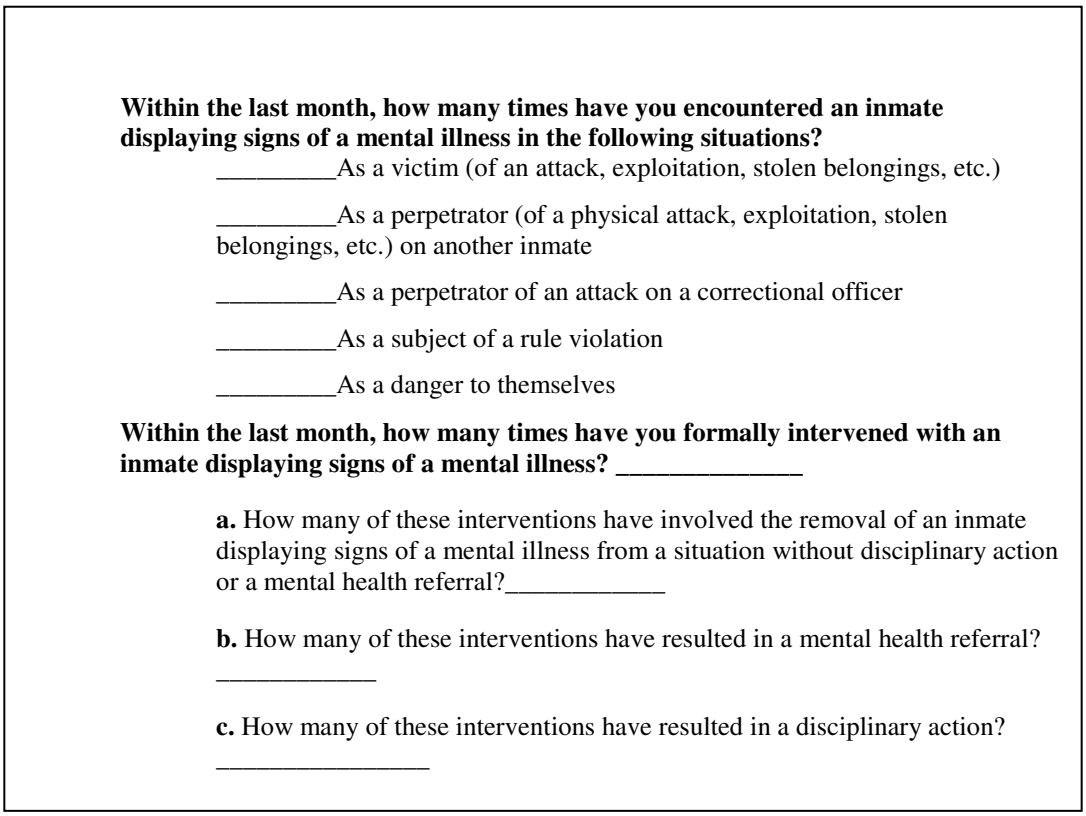
b. How many of these interventions have resulted in a mental health referral? _____

c. How many of these interventions have resulted in an arrest? _____

Figure 5: Survey Excerpt-Nature and Extent of Law Enforcement Encounters and Interventions

Wells and Shafer (2006) asked similar questions pertaining to the extent and nature of law enforcement encounters with persons with a mental illness. However, the categories of the encounters included in this study stem from a report generated by the Council of State Governments in the Criminal Justice Mental Health Consensus Project (2002) which identified the most common reasons for a law enforcement response to situations involving persons with a mental illness. The question pertaining to the disposition of formal law enforcement interventions involving persons with a mental illness is partially derived from Wells and Shafer (2006). It is hypothesized that law enforcement officers will report an increase in mental health referrals and a decrease in reported number of arrests on the follow-up questionnaire. As previously mentioned, this particular question only pertains to law enforcement officers. However, a separate section was created to measure any changes in the disposition of mental health crises occurring in the correctional setting by asking several questions of correctional officers at the pre-test and follow-up data collection points. These questions were not derived

from an external source. The following questions represent the questions specific to correctional officers in this section:



Within the last month, how many times have you encountered an inmate displaying signs of a mental illness in the following situations?

_____As a victim (of an attack, exploitation, stolen belongings, etc.)

_____As a perpetrator (of a physical attack, exploitation, stolen belongings, etc.) on another inmate

_____As a perpetrator of an attack on a correctional officer

_____As a subject of a rule violation

_____As a danger to themselves

Within the last month, how many times have you formally intervened with an inmate displaying signs of a mental illness? _____

a. How many of these interventions have involved the removal of an inmate displaying signs of a mental illness from a situation without disciplinary action or a mental health referral?_____

b. How many of these interventions have resulted in a mental health referral? _____

c. How many of these interventions have resulted in a disciplinary action? _____

Figure 6: Survey Excerpt-Nature and Extent of Correctional Encounters and Interventions

Independent Variables

Prior research has not incorporated officer-level independent variables when examining the effectiveness of CIT training. These factors are important because they represent possible mediators of measurable training effects. The officer-level demographic characteristics that are utilized as independent variables in this study include race (nonwhite=0, white=1), sex (female=0, male=1), and age. The occupational characteristics of officers included in this survey are officer type (correctional=0, law enforcement=1), years of service, rank (patrol/line

officer=0, supervisory officer=1). Other officer-level variables that were examined as they relate to potential training effects include previous mental health training (0=no, 1=yes), prior exposure to mental illness (0=no, 1=yes), and whether the officer volunteered for the training (0=no, 1=yes). The voluntary status of the officer is an important variable to consider in the present study because the Memphis CIT training curriculum was originally designed to be provided only to officers that volunteered for the training. However, agencies are increasingly seeking full implementation with the desire to have their entire agency trained in CIT. Therefore, gaining an understanding as to whether officers' voluntary status really matters in terms of training effectiveness has valuable practical implications. In addition to examining officer-level characteristics, this study also explored county-level differences among officers in terms of program effectiveness.

Sampling

The first step in obtaining the sample for the program evaluation component of the study involved extensive communication with the Chair of the Florida CIT Coalition. The Coalition is a conglomerate of criminal justice and mental health representatives responsible for the promotion of the Memphis CIT model and providing technical assistance for Florida counties considering the implementation of the CIT program. Contact information for the CIT coordinators within the fourteen counties in Florida known to train both law enforcement and correctional officers in the CIT curriculum was obtained through telephone and email correspondence with the Chair of this collaborative group. Correspondence was initiated with each of these coordinators to solicit their cooperation and participation in this study. Based upon

their responses, a convenience sample was formulated representing those counties willing to participate in the study.

The units of analysis for the program evaluation are individual law enforcement and correctional officers receiving CIT training in the Florida counties mentioned above between July and December of 2012. According to contacts made with CIT coordinators across the State, there are approximately 1,380 total officers trained in these counties on an annual basis. Each CIT class consists of approximately thirty officers, with roughly 8-10 of those being correctional officers. The actual ratio of correctional to law enforcement officers in each of the CIT training classes varies by county. The constrained study timeframe dictated the number and location of the classes included in the sample based on scheduling availability. Officers from one CIT class in seven of the nine counties were included in the sample. In the two remaining counties, officers were surveyed in two separate CIT training classes. In total, surveys were distributed to officers in eleven CIT classes, which resulted in a total sample size of 279 officers, consisting of 179 law enforcement officers and 100 correctional officers.

Confidentiality/IRB

The instruments utilized in the program evaluation component of this study were approved by the UCF Institutional Review Board. The approval letters and the consent forms are included in Appendix B. To maintain the confidentiality of the responses to the questionnaires, the officers were asked to create a Unique ID using the first two letters of the high school they attended, the day of the month on which they were born, and their middle initial or "x" if they do not wish to provide their middle initial. This Unique ID was employed to link their responses to the three questionnaires for statistical analysis purposes. They were also asked to provide a valid

email address for the follow-up questionnaire. However, they were reassured in the consent form that their email addresses were only to be utilized for this purpose and will not be linked to their survey responses.

Results

Of the 300 total officers that received the pretest survey, 294 completed and returned the surveys, including 103 correctional officers and 191 law enforcement officers. The posttest survey was administered to the 294 officers that completed the pretest. Of the 279 officers that completed the posttest, 100 were correctional officers and 179 were law enforcement officers. Among those officers that completed the posttest survey, three officers resigned, one was relieved of their position and one died prior to completing the follow-up survey. In addition, 29 officers failed to provide a valid email address to receive the follow-up survey. Therefore, an attrition rate of 12% brought the possible sample size for the follow-up survey down to 215. Of the 215 officers that received the follow-up survey, 117 total officers completed the survey, comprised of 43 correctional officers and 74 law enforcement officers. The response rates for the officer surveys were 98% for the pretest, 95% for the posttest, and 42% for the follow-up survey. Figure 1 illustrates the total survey response rates for each data collection point.

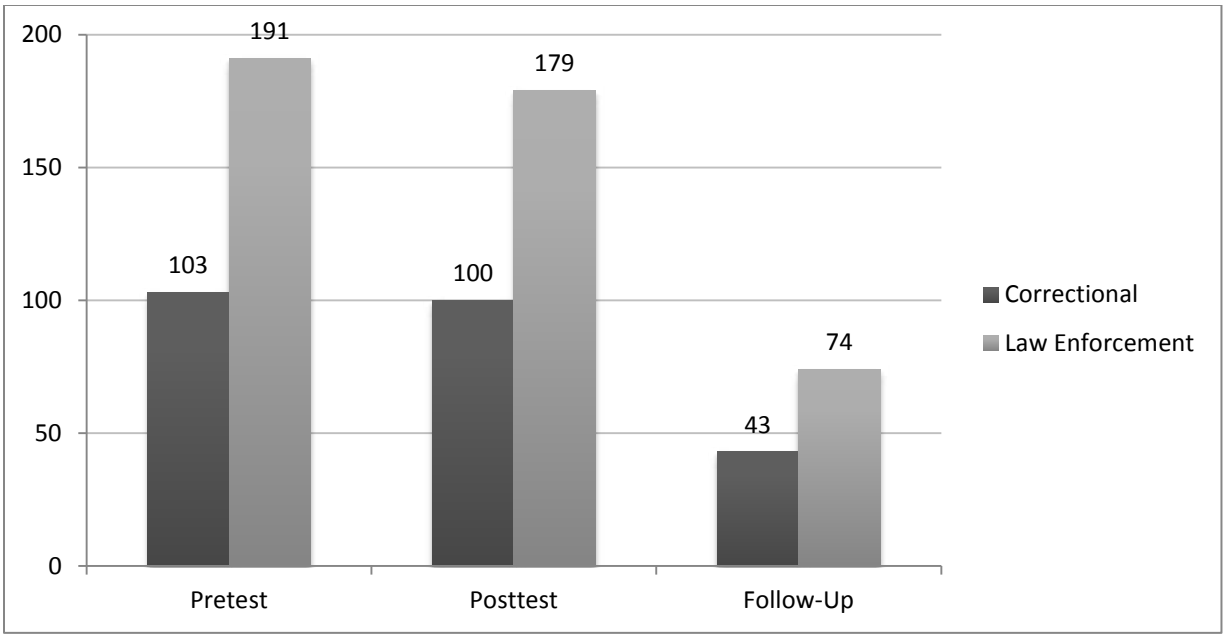


Figure 7: Total Survey Responses

Procedure

Several analytical procedures were employed to evaluate the effectiveness of the CIT training program. Statistical Software for the Social Sciences (SPSS) was employed to conduct these analyses. The variables were re-coded using the recode function in the SPSS software program. Missing data and cases were excluded from each of the analytical procedures by selecting the missing pairwise deletion technique.

First, descriptive statistics and frequency distributions were utilized to provide an overview of the officer-level characteristics of the sample. Secondly, Pearson's Correlation Coefficients and Chi-Squared tests were employed to examine the relationships between the independent variables (i.e. officer-level characteristics). Next, the immediate training effects were assessed by comparing officers' mean pretest scores to officers' mean posttest scores on the

five key measures of training effectiveness that reflect the hypotheses previously outlined. The five key measures include Knowledge of Mental Illness, Self-Efficacy, Perceptions of Verbal De-escalation, Perceptions of Mental Health Referral Process and Mental Health Services, and Knowledge of Mental Health Referral Process and Mental Health Services.

Moving forward, the relationships between the independent variables and the change variables (posttest scores-pretest scores) on the key dependent measures were tested. In addition, several ANOVA models were created to test for interaction effects among the independent variables as they relate to the change variables reflecting the measures of training effectiveness. Following these analyses, a series of multilevel mixed regression models were constructed to control for the county of training and the other independent variables.

Prior to incorporating the follow-up survey data to examine the intermediate training effects, a series of bivariate analytical procedures were conducted to identify potential sources of response bias. The group of officers that responded to the follow-up survey were compared to the group of officers that did not respond to the follow-up survey on the independent variables and the dependent measures at the pretest and posttest data collection points, as well as on the pretest/posttest dependent change variables (see page 129). These analyses are essential to understanding potential response bias that may diminish the generalizability of the findings related to the intermediate (posttest to follow-up) training effects. Response bias was not assessed for the immediate training effects data (pretest to posttest) because there was not enough information on non-respondents to conduct comparative analyses.

The first step employed in the examination of the intermediate training effects involved the comparison of officers' mean scores on the posttest survey to the mean scores on the follow-

up survey for each of the three measures of training effectiveness captured at all three data collection points ("Knowledge of Mental Illness," "Self-Efficacy," "Perceptions of Verbal De-escalation"). The remaining two hypotheses pertaining to "Perceptions of Mental Health Training and Mental Health Resources" and "Knowledge of Mental Health Training and Mental Health Resources" were not measured in the same manner on the follow-up survey as they were on the pretest and posttest surveys. Therefore, descriptive statistics were utilized to assess the impact of CIT training on these measures.

Change variables were created for the three dependent measures that used the same questions on the pretest, posttest, and follow-up surveys. The independent variables were incorporated once more to identify predictors of change between the posttest and follow-up data collection points on "Knowledge of Mental Illness," "Self-Efficacy," and "Perceptions of Verbal De-escalation." Associations among the independent variables were identified and tested as interaction effects utilizing the Two-Way Between-Groups ANOVA analytical technique with the dependent change variables. Multivariate analytical procedures were employed to examine the strength of the relationships between the independent variables and the dependent change variables when controlling for county of training. In addition, box plots were created to illustrate the mean changes between the pretest, posttest, and follow-up data collection points. Linear growth curve models and multiple pairwise comparisons were utilized to further illuminate the change in scores over time on these three measures.

The final training evaluation hypothesis tested in the present study pertains to the diversionary objective of CIT training. As mentioned previously, officers were asked several questions on the pretest and follow-up surveys that address the nature and frequency of their

encounters and interventions in situations involving persons or inmates with a mental illness. These questions were included on the pretest to get a baseline score for comparison with the follow-up data. This component of the study is intended to assess whether these officers are being more heavily utilized in this regard following their completion of CIT training. In addition, officers were asked how often they initiate a mental health referral versus an arrest (LEO) or disciplinary action (CO) at both time points to determine whether the completion of CIT training diminishes the frequency with which officers initiate an arrest (LEO) or disciplinary action (CO) and increases the frequency with which they initiate a mental health referral. Descriptive statistics and frequency distributions were utilized to assess this component of the study. In addition, the pretest means were compared to the posttest means to measure changes over time. Finally, the relationships between the independent variables and the frequency of encounters and interventions were also tested.

Analysis

Officer-Level Characteristics

In addition to officer type, the pretest captured several demographic and occupational characteristics of respondents: age, sex, race, ethnicity, years of service, and rank (See Table 1). The descriptive statistics for these variables are reported for the 279 officers that completed the pretest and posttest surveys. The minimum age for the respondents was 20 and the maximum age was 60, with a mean age of 36. Nearly 80% of the officers that responded to the pre and posttest surveys were male. In addition, approximately 75% of the respondents were White, while 17% reported Black as their race, and the remaining 8% were American Indian,

Asian, or "Other." For analytical purposes, this categorical variable was collapsed into White or Non-White officers. Among the respondents, 16% reported their ethnicity as Hispanic. The minimum year(s) of service was zero because there were several new recruits in the CIT training classes. The maximum year(s) of service was 32, and the mean was 8 years of service. The officers were asked to indicate their rank in an open-ended question. This variable was later collapsed into line officer (patrol or detention deputy), or supervisory rank (lieutenant, captain, sergeant, etc.). Roughly 78% were line officers, with the remaining 22% falling into the supervisory rank category.

The pretest survey included several additional questions that were utilized as independent variables when examining the outcome measures associated with training effectiveness (See Table 1). The first question asked the officers to indicate whether or not they volunteered for CIT training. In this sample, 62% volunteered for the training, while 37% indicated they did not volunteer for the training, and the remaining 1% failed to answer the question. The goal of including this question as an independent variable is to determine whether an officer's volunteer status has any impact on the effectiveness of the curriculum.

Table 1: Officer-Level Characteristics (n=279)

Variable	*N*	*%*	*Variable*	*#*
Officer Type			**Age**	
Law Enforcement	179	64	Minimum	20
Correctional	100	36	Maximum	60
White			Mean	36
White	208	75	SD	9
Non-White	71	25		
Hispanic			**Years of Service**	
Hispanic	45	16	Minimum	0
Non-Hispanic	232	83	Maximum	32
Missing	2	1	Mean	8
Sex			SD	7
Male	220	79		
Female	59	21		
Rank				
Line Officer	218	78		
Supervisor	59	21		
Missing	2	1		
Volunteer Status				
Volunteer	172	62		
Non-Volunteer	103	37		
Missing	4	1		
Prior MH Training				
Yes	150	54		
No	123	44		
Missing	6	2		
Know Someone with MI				
Yes	89	32		
No or “Don’t Know”	187	67		
Missing	3	1		

Two additional independent variables that are included in this study reflect questions in the pretest that address prior exposure to mental illness. The first question asked officers to indicate whether or not they received mental health training in their law enforcement or correctional officer training academy. Approximately 44% reportedly received mental health training in the academy, while 54% of the officers included in this sample did not and the

remaining 2% did not respond to the question. The second question pertaining to prior exposure to mental illness asked the officers to indicate if they know someone personally with a mental illness (i.e. family member, friend, coworker, etc.). Only 32% reported knowing someone with a mental illness, while 54% reported they did not know someone with a mental illness, and the remaining 14% selected "don't know" in response to this question. These questions were included as independent variables in the analytic models to determine if CIT training has a greater or lesser impact on officers with prior exposure to mental illness or previous mental health training. Variables reflecting these officer-level characteristics were tested as possible mediating variables that could contribute to any changes that may have occurred between the pretest and posttest, as well as the follow-up data collection point with regard to the key measures of training effectiveness.

A series of Pearson's Correlation Coefficients and Chi-Squared tests were created to examine the relationships between the officer-level independent variables using the data collected for the 279 officers that completed the pretest and posttest surveys. The correlation matrix in Table 2 provides the direction and strength of the associations among these variables. Several Chi-Squared tests verified the significance of associations between the categorical variables. As illustrated, officer type was significantly positively associated with race ($p < .01$) and sex ($p < .05$). Officer type, sex, and race were all negatively associated with volunteer status ($p < .01$). In addition, officer ethnicity was negatively associated with race ($p < .05$) and positively associated with volunteer status ($p < .05$). Officer rank was positively associated with years of service and age ($p < .05$). Finally, officer age was positively associated with years of service ($p < 0.01$) and negatively associated with prior mental health training ($p < .05$).

An additional correlation matrix was included to highlight the significant relationships identified between the officer-level characteristics using only the data representing the 117 officers that completed the follow-up survey (Table 3). This analytical procedure was conducted to determine if the previously identified associations were still present among this subset of officers. In addition, this process illuminated different interactions that were not present among the total sample, but became an issue when the same dwindled down. A series of Chi-Squared tests verified the significance of the noted associations between categorical variables. When looking at this subset of officers, officer type was still significantly positively associated with race (p <.01). In addition, volunteer status was still negatively associated with officer type (p < .05) and race (p <.01), while it was positively associated with officer ethnicity. Also, officer rank was still positively associated with age and years of service (p <.01), while prior mental health training was negatively associated with age and years of service (p < .05). Officer type was also negatively associated with officer age (p <.01). Officer ethnicity was still negatively associated with race (p < .05) and officer age was still positively associated with years of service (p <.01). The significant relationship between officer type and sex diminished to a non-significant level, as did the relationship between officer sex and volunteer status.

Although several possible sources of multicollinearity were identified, most of these variables warrant consideration in future analyses due to their theoretical importance. However, officer ethnicity and race tap into similar constructs, in the same way officer age and years of service are essentially measuring the same thing. Therefore, to reduce the risk of multicollinearity, the variables representing officer ethnicity and officer age were excluded from future analytical procedures. Ethnicity was selected for removal because only a small portion of

the sample reported being Hispanic, meaning race appeared to be a more important characteristic for differentiation. When making the determination as to whether to remove officer age or years of service, the theoretical relationship between officer age and years of service was considered in relation to the effectiveness of on-the-job training. In the context of the current study, it was deemed more pertinent to include years of service as opposed to age as a measure of on-the-job experience. The variable "years of service" is therefore a proxy for officer age and years of on-the-job exposure to mental health incidents making it a potentially important predictor of training effectiveness.

While association does not equal causation, it is important to consider the possible confounding or compounding effect these interactions may have with regard to the effectiveness of the CIT training program. Therefore, the remaining associations identified in Table 2 among the independent variables using the data collected from all 279 officers that completed the pretest and posttest surveys were tested as interaction effects in the models examining the immediate training effects (pretest to posttest changes). The associations found between the officer-level characteristics (Table 3) among the subset of officers (n=117) that responded to the follow-up survey were tested as interaction effects in the models utilized to assess the intermediate training effects (posttest to follow-up changes).

Table 2: Associations Among Officer Characteristics Pre-Posttest Sample (n=279)

	Type	Race	Ethnic	Sex	Rank	MH Train	Volunteer	Know Someone	Age
Type	--	--	--	--	--	--	--	--	--
Race	.250**	--	--	--	--	--	--	--	--
Ethnic	-.080	-.149*	--	--	--	--	--	--	--
Sex	.144*	.100	-.038	--	--	--	--	--	--
Rank	-.035	.059	-.080	-.036	--	--	--	--	--
MH Train	.090	.006	.033	.069	-.008	--	--	--	--
Volunteer	-.299**	-.176**	.153*	-.167**	-.076	.086	--	--	--
KSomeone	-.001	.099	.036	-.056	.039	.110	.602	--	--
Age	-.193**	-.039	-.094	-.049	.334**	-.134*	.039	.052	--
Yrs of Svc	-.116	-.023	-.054	-.049	.383**	-.111	.041	-.026	.689**

Note: *= Associations significant at .05, **= Associations significant at .01

Table 3: Associations Among Officer Characteristics Post-Follow Up Sample (n=117)

	Type	Race	Ethnic	Sex	Rank	MH Train	Volunteer	Know Someone	Age
Type	--	--	--	--	--	--	--	--	--
Race	.247**	--	--	--	--	--	--	--	--
Ethnic	-.143	-.189*	--	--	--	--	--	--	--
Sex	.153	.168	.073	--	--	--	--	--	--
Rank	-.040	.093	-.040	-.067	--	--	--	--	--
MH Train	.086	-.018	-.008	.174	-.125	--	--	--	--
Volunteer	-.227*	-.252**	.210*	-.133	-.138	-.007	--	--	--
KSomeone	-.035	.155	.010	-.110	.085	.059	-.074	--	--
Age	-.259**	.072	-.008	-.020	.357**	-.187*	.002	.019	--
Yrs of Svc	-.101	.040	-.024	-.084	.465**	-.228*	.072	-.096	.663**

Note: *= Associations significant at .05, **= Associations significant at .01

Immediate Training Effects: Pretest/Posttest Results

To test the previously outlined program evaluation hypotheses, five key outcome measures associated with training effectiveness were captured on the pretest and posttest

surveys: 1) basic knowledge of mental illness, 2) perceptions of self-efficacy, 3) perceptions of verbal de-escalation, 4) perceptions of community mental health resources and the mental health referral process, and 5) knowledge of community mental health resources and the mental health referral process. The first step in the program evaluation analytical process involves examining the immediate training effects, by conducting a series of paired samples t-tests to measure the mean changes in scores on the key outcome measures between the pretest and posttest. The results of these analyses are presented below in Table 4.

Table 4: Immediate Training Effects (n=279)

	Pretest $\bar{x}$	**Posttest $\bar{x}$**	**SD**	***t***	**df**
H1: Knowledge of Mental Illness	5.85 (out of 8)	6.67	1.375	9.836***	271
H2: Self Efficacy	15.71 (out of 24)	19.62	4.55	14.09***	268
H3: Perceptions of Verbal De-escalation	9.89 (out of 12)	10.65	2.52	4.980***	271
H4: Perceptions of MH Services & Referral Process	6.21 (out of 12)	8.10	2.79	10.998***	265
H5a: Knowledge of MH Referral Process	2.40 (out of 4)	3.37	1.043	15.162***	267
H5b: Knowledge of MH Services	2.18 (out of 4)	3.31	1.047	17.871***	270

Note: *** = $p < .001$

To identify changes in "Knowledge of Mental Illness," a composite variable was created to reflect the number of correct responses to eight knowledge-based questions at the pretest and posttest. A paired samples t-test was conducted to compare the mean number of correct responses on the pretest to the mean number of correct responses on the posttest. This analysis revealed a statistically significant increase in the mean number of correct responses from the pretest to the posttest, which suggests CIT training does improve officers' knowledge of mental illness on average.

For the "Self-efficacy" outcome, responses to six questions were summed to create a composite variable for the pretest and a separate composite measure comprised of the same questions was created using the posttest responses. A paired samples t-test was conducted to compare the pretest mean score to the posttest mean score on this composite measure. The results of this analysis indicate that on average CIT training significantly increases officers' self-efficacy with regard to responding to mental health crises.

Similarly, two separate composite variables consisting of the aggregated responses to three questions were created to represent "Perceptions of Verbal De-escalation" at the pretest and posttest data collection points. The results of a paired samples t-test comparing the pretest and posttest means on this measure revealed a statistically significant increase, indicating that on average CIT training improved officers' perceptions of verbal de-escalation. For the "Perceptions of Mental Health Services and Mental Health Referral Process" outcome, the same type of summed variable was created using three questions from the pretest and posttest surveys. The results of the paired samples t-test comparing the pretest and posttest mean scores on this composite measure suggested on average officers' perceptions of mental health services and the mental health referral process increased significantly as a result of CIT training.

The final outcome measure associated with CIT training effectiveness included in this study is "Knowledge of Mental Health Referral Process and Community Resources." To measure this outcome, two questions included on the pretest and posttest surveys were analyzed separately. The first question pertains to knowledge of the Baker Act (involuntary mental health referral process in Florida) and the second question is related to familiarity with available community mental health resources. Two separate paired samples t-tests were employed to

examine changes between the pretest and posttest on these two questions, both of which revealed a statistically significant improvement on these scores. The higher the scores on each of the measures reflecting training effectiveness, the greater the knowledge and perceptions are in relation to each measure. Therefore, an increase on each of these scores between the pretest and posttest equates to an improvement in knowledge or perceptions among officers attributable to CIT training.

The results of the paired samples t-tests measuring the immediate training effects indicate that on every measure of training effectiveness there was a statistically significant increase between the pretest and posttest. The greatest improvements were found on the "Knowledge of Mental Health Referral Process" and "Knowledge of Mental Health Services" measures, which demonstrated a mean increase between the pretest and posttest of 24% and 28%, respectively. Significant growth was also noted for the "Self-Efficacy" and "Perceptions of Mental Health Services and Mental Health Referral Process" measures, both of which increased by approximately 16%. Furthermore, "Knowledge of Mental Illness" increased 10% and "Perceptions of Verbal De-escalation" improved by 6%. The findings derived from the paired samples t-tests revealed CIT training effectively improved officers' scores on every officer-level objective measured in this study.

To explore the immediate training effects further, the relationships between the five key outcome measures and the independent variables previously outlined were tested using a series of bivariate analytical procedures. The following independent variables were included in this analytical process: officer type, sex, race, rank, years of service, volunteer status, prior exposure to mental illness, and previous mental health training. The purpose of these analyses is to

identify any possible mediating relationships between the independent variables and the outcome measures that may need to be taken into consideration in the construction of multivariate models. To elaborate, it is possible that certain officer characteristics could mediate the effectiveness of CIT training, meaning the presence of certain characteristics may increase or decrease the impact of the training. Furthermore, these analytical procedures intend to rule out any individual-level officer differences that could be alternative explanations for the immediate training effects.

Prior to conducting these analyses, a change variable was created for each outcome measure, which was calculated by subtracting the pretest mean from the posttest mean. A series of independent samples t-tests were conducted to test the relationships between the categorical independent variables and the change variables representing the outcome measures (see Table 5). Additionally, Pearson's Correlation coefficients were utilized to examine the relationships between years of service and the immediate training effects. The Pearson's correlation coefficients revealed no statistically significant relationships, indicating that officers' level of experience does not play a role in their receptivity to CIT training.

The results of the independent samples t-tests involving rank and prior exposure to mental illness indicated that these variables also have no relevance to the officer-level CIT training objectives. These findings suggest the immediate training effects are not directly attributable to officers' years of service, rank, or prior exposure to mental illness. The significant findings of the independent samples t-tests involving the remaining independent variables are provided in Table 5.

Two significant differences were identified between law enforcement and correctional officers on the key outcome measures, as presented in Section A of Table 5. While correctional

officers improved more than law enforcement officers on every key outcome measure aside from "Knowledge of Mental Illness," significant differences between the two groups were only identified for the "Knowledge of the Mental Health Referral Process" and "Knowledge of Mental Health Services" measures. Correctional officers experienced a 37% increase ($\bar{x}$ change=1.49, SD=.91) on the "Knowledge of Mental Health Referral Process" measure, compared to a 17% increase demonstrated by law enforcement officers ($\bar{x}$ change= .68, SD= .99). On the "Knowledge of Mental Health Services" measure, correctional officers improved by 40% ($\bar{x}$ change=1.61, SD=.95), whereas law enforcement officers improved ($\bar{x}$ change=.87, SD=1.00) at nearly half that rate. While these findings indicate correctional officers gain more than law enforcement officers from CIT training in terms of enhancing their knowledge of mental health resources and the mental health referral process, the comparative pretest means suggest law enforcement officers began CIT training with a greater knowledge base in these areas. Thus, the correctional officers had more to learn when entering the class.

In Section B of Table 5, the significant findings related to the impact of officer sex on immediate training effects are presented. On the "Self-Efficacy" measure, females demonstrated a 22% increase ($\bar{x}$ change= 5.25, SD= 5.02), whereas males experienced a 15% mean increase ($\bar{x}$ change=3.52, SD=4.36). Females also experienced a greater increase than males on the "Knowledge of Mental Health Referral Process" measure, with comparative improvement rates of 30% ($\bar{x}$ change=1.22, SD=1.18) for females and 22% ($\bar{x}$ change=.90, SD=.99) for males. With regard to both of these measures, females scored significantly lower than males on the pretest surveys, indicating they had more to learn at the start of the training. Also worth noting, males

gained more than females on all of the other measures, although these findings did not reach statistical significance.

As presented in Section C of Table 5, statistically significant relationships were identified between officer race and the "Knowledge of Mental Health Referral Process" measure, as well as the "Knowledge of Mental Health Services" measure. A mean increase of 31% ($\bar{x}$ change= 1.25, SD=1.04) was found among non-white officers, compared to a mean increase of 22% for white officers ($\bar{x}$ change=.88, SD=1.06) on the "Knowledge of Mental Health Referral Process" measure. In addition, non-white officers demonstrated a 34% mean improvement rate ($\bar{x}$ change=1.36, SD=1.10) on the "Knowledge of Mental Health Services" measure, whereas white officers experienced a mean increase of 26% ($\bar{x}$ change= 1.06, SD=1.02). One important caveat, white officers scored significantly higher than non-white officers on these measures at the pretest data collection point, which indicates non-white officers had more to gain in terms of these knowledge elements of CIT training.

Section D of Table 5 presents the findings pertaining to the significant relationships identified between officer volunteer status and CIT training effectiveness. As illustrated, officers that volunteered for the training experienced a 27% increase ($\bar{x}$ change=1.09, SD=.91) on the "Knowledge of Mental Health Referral Process" measure, whereas non-volunteers improved by 18% ($\bar{x}$ change=.79, SD=1.10) on this measure. Conversely, non-volunteers actually gained significantly more ($\bar{x}$ change=1.05, SD=1.4) than volunteers $\bar{x}$ change=.70, SD=1.35) on the measure representing "Knowledge of Mental Illness." This translates to a 13% increase for non-volunteers and a 9% improvement rate for volunteers. Finally, Section E of Table 5 illustrates that officers without prior mental health training gained significantly more ($\bar{x}$ change=1.06,

SD=1.45) than officers with prior mental health training ($\bar{x}$ change=.61, SD=1.26) on the "Knowledge of Mental Illness" measure. Officers with prior mental health training had a higher mean score on this measure at the pretest indicating they had less to learn.

When examining the impact of the independent variables on the six key measures of CIT training effectiveness, it appears these variables may play a mediating role in predicting immediate training effects. Although some groups demonstrated greater improvements on certain objectives when compared to others, all groups increased on every training objective indicating no detectable declines on these measures. In terms of the first training objective, officer volunteer status and prior mental health training are significantly related to mean changes on the "Knowledge of Mental Illness" measure. Additionally, a significant relationship was identified between officer sex and mean changes on the "Self Efficacy" measure. Regarding the mean changes on the "Knowledge of the Mental Health Referral Process" measure, the independent variables warranting further consideration include officer type, sex, race, and whether or not they volunteered for the training. Finally, officer type and race were significantly related to mean changes on the "Knowledge of Mental Health Services" measure. The significant relationships just presented were utilized to guide the development of multivariate models to further test the immediate training effects. No statistically significant relationships were identified between the independent variables and mean changes on the "Perceptions of Verbal De-Escalation" measure or the "Perceptions of Mental Health Referral Process and Services" measure thus precluding the need to develop multivariate models for these measures.

Table 5: Independent Variables and Immediate Training Effects

Variables	$\bar{x}$ Change[a]	SD Change	$\bar{x}$ Change[a]	SD Change	t	df
Section A: Officer Type[b]	*COs*	*COs*	*LEOs*	*LEOs*		
Knowledge of MH Referral Process (range= 0-4)	1.49	.91	.68	.99	6.62***	266
Knowledge of MH Services (range= 0-4)	1.61	.95	.87	5.71	5.71***	269
Section B: Sex	*Males*	*Males*	*Females*	*Females*		
Self-Efficacy (range=0-24)	3.52	4.36	5.25	5.02	2.72**	267
Knowledge of MH Referral Process (range= 0-4)	.90	.99	1.22	1.18	2.02*	266
Section C: Race	*White*	*White*	*Non-White*	*Non-White*		
Knowledge of MH Referral Process (range= 0-4)	.88	1.03	1.25	1.04	2.517*	266
Knowledge of MH Services (range= 0-4)	1.06	1.02	1.36	1.10	2.00*	269
Section D: Volunteer [c]	*Volunteer*	*Volunteer*	*Non-Volunteer*	*Non-Volunteer*		
Knowledge of MH Referral Process (range= 0-4)	1.09	.91	.79	1.10	-2.3*	263
Knowledge of MI (range= 0-8)	.70	1.35	1.05	1.4	2.03*	266
Section E: Prior MH Training[d]	*Prior Train*	*Prior Train*	*No Prior Train*	*No Prior Train*		
Knowledge of MI (range= 0-8)	.61	1.26	1.06	1.45	2.68**	264

Note: *= p <.05, **= p <.01, *** = p < .001.
[a]=Posttest mean – pretest mean
[b]= COs (Correctional Officers) and LEOS (Law Enforcement Officers)
[c]= Volunteer (Officers Volunteered for CIT training) and Non-Volunteer (Officers did not volunteer for training)
[d]= Prior Train (Officers with Prior Mental Health Training) and No Prior Train (Officers with No Prior Mental Health Training)

Upon identification of the important relationships between the independent variables and the immediate CIT training effects, a series of Two-Way Between-Group Analysis of Variance

(ANOVA) procedures were conducted to examine the presence of interactions between independent variables that may explain the relative effectiveness of CIT training (See Table 6).

Table 6: Two-Way Between-Group ANOVA Results (n=279)

Interaction Term	*Df*	*SS*	*MS*	*F*
Knowledge Change				
Type x Sex	1	.000	.000	.000
Type x Race	1	1.917	1.917	1.008
Type x Volunteer Status	1	.914	.914	.485
Sex x Volunteer Status	1	2.733	2.733	1.468
Rank x Yrs of Service	1	.454	.454	.240
Self-Efficacy Change				
Type x Sex	1	67.341	67.341	3.342
Type x Race	1	17.902	17.902	.858
Type x Volunteer Status	1	3.871	3.871	.183
Sex x Volunteer Status	1	.115	.115	.006
Rank x Yrs of Service	1	1.803	1.803	.087
Perceptions of Verbal De-Escalation				
Type x Sex	1	13.718	13.718	2.172
Type x Race	1	9.654	9.654	1.520
Type x Volunteer Status	1	1.778	1.778	.274
Sex x Volunteer Status	1	1.352	1.352	.209
Rank x Yrs of Service	1	.151	.151	.023
Perceptions of MH Services				
Type x Sex	1	10.361	10.361	1.328
Type x Race	1	35.169	35.169	4.572
Type x Volunteer Status	1	25.486	25.486	3.310
Sex x Volunteer Status	1	2.777	2.777	.355
Rank x Yrs of Service	1	2.740	2.740	.349
Knowledge of MH Referral Process				
Type x Sex	1	.760	.760	.811
Type x Race	1	1.463	1.463	1.558
Type x Volunteer Status	1	1.828	1.828	1.938
Sex x Volunteer Status	1	1.202	1.202	1.127
Rank x Yrs of Service	1	.024	.024	.022
Knowledge of MH Services				
Type x Sex	1	.483	.483	.495
Type x Race	1	2.065	2.065	2.123
Type x Volunteer Status	1	1.749	1.749	1.787
Sex x Volunteer Status	1	.641	.641	.584
Rank x Yrs of Service	1	.398	.398	.363

As mentioned previously, a correlation matrix was created to examine the relationships between the independent variables (Table 2). Chi-Squared tests were utilized to affirm the significance of the associations among the categorical variables. This analytical procedure revealed officer type was significantly associated with race, sex, and volunteer status. In addition, officer sex was also associated with volunteer status and officer rank was associated with years of service. Separate ANOVA models were created to examine the presence of interactions among each set of associated variables as they relate to the six dependent variables that represent the immediate training effects. As presented in Table 6, at the .05 alpha level no significant interaction effects were identified among the associated independent variables and the dependent variables. Therefore, the multivariate regression models do not include interaction terms.

To determine the extent to which the bivariate relationships between the independent variables and the dependent measures reflecting immediate training effects remain when controlling for other variables, a series of multilevel mixed linear models were created. This analytical procedure was selected because mean differences were identified when examining the relationship between county of training and the immediate training effects, suggesting the changes on these measures could be attributed to county-level differences in training. As mentioned previously, CIT training is provided to officers within a specified county so while the key components of the training remain intact, the training may differ slightly in terms of the coordinating agency, the individuals presenting the material, the presentation mode, the length of time spent on each component and the location of the training. To control for county-level differences, a categorical variable representing each of the counties in the study was treated as a

random effect in a series of mixed linear models examining the relationships between the independent variables and the immediate training effects. The results of these analyses are presented in Tables 7-10.

Table 7: Multilevel Mixed Linear Model, Dependent Variable: "Change in Knowledge of Mental Illness"

Effect	*β*	*SE*
Type	.043	.198
Sex	.468*	.208
Race (White)	-.088	.197
Years of Service	.016	.012
Prior Mental Health Training	-.447**	-.264
Volunteer Status	-.185	-.871

Note: *= p <.05, **= p <.01,
Note: Likelihood Ratio Test (6, n=272) = 38.374, p <.001

In the first model, the change variable representing "Knowledge of Mental Illness" is the dependent variable, while volunteer status and prior mental health training are the key independent predictor variables because they had a statistically significant relationship with the dependent variable at the bivariate level. Officer type, race, sex, and years of service were treated as control variables. County of training was the nesting variable that was treated as a random effect in this model. The results of this analysis are presented in Table 7. As illustrated, Prior Mental Health Training remains a significant predictor of "Change in Knowledge of Mental Illness" (β=-.447, p <.05). Because the dependent variable is based on an eight-point continuous scale, a .447 change translates to an estimated 6% greater knowledge gain among officers without prior mental health training when compared to officers with prior mental health training. As previously mentioned, officers with prior mental health training had a significantly higher

base knowledge than officers without prior mental health training which suggests they had less to learn from the training. This model also revealed that with all other variables held constant, sex became a significant predictor of "Change in Knowledge of Mental Illness" (β=.468, p <.01). This finding indicates that males gained almost 6% more than females on this measure of training effectiveness. These groups were not significantly different in terms of their scores on the "Knowledge of Mental Illness" measure at the pretest data collection point, which suggests the difference in knowledge gain is attributable to the training not a difference that existed at baseline.

Table 8: Multilevel Mixed Linear Model, Dependent Variable: "Change in Self-Efficacy"

Effect	*β*	*SE*
Type	-.403	.660
Sex	-1.41*	.697
Race (White)	-.565	.668
Years of Service	-.070	.042
Prior Mental Health Training	-.770	.573
Volunteer Status	-.563	.721

Note: *= p <.05
Note. Likelihood Ratio Test (6, n=269) = 53.083, p <.001

The findings from the multilevel mixed linear regression model examining the change in "Self-Efficacy" measure are presented in Table 8. For this model, sex is the only key predictor variable that had a significant relationship with this measure at the bivariate level, the other independent variables that were included in this model as control variables are officer type, race, sex, years of service, prior mental health training, and volunteer status. Similar to the previous multivariate model, these variables are nested within the county of training, which is treated as a

random effect in this model. As illustrated in Table 8, when holding all other variables constant sex remained a significant predictor of the change in "Self-Efficacy" measure (β=-1.41, $p < .05$). The dependent variable is based on a twenty-four-point scale, thus the 1.41 change on this measure indicates a 6% difference between males and females in terms of their gain on this measure. This suggests that females gained slightly more than males on the "Self Efficacy" measure of training effectiveness. As discussed previously, females scored lower than males on this measure at baseline suggesting they had more to gain in this area throughout the training.

Table 9: Multilevel Mixed Linear Model, Dependent Variable: "Change in Knowledge of Mental Health Referral Process"

Effect	*β*	*SE*
Type	-.779***	.143
Sex	-.119	.153
Race (White)	-.188	.145
Years of Service	-.004	.009
Prior Mental Health Training	-.109	.124
Volunteered for Training	.051	.150

Note: ***= $p < .001$
Note: Likelihood Ratio Test (6, n=268) = 39.424, $p < .001$

In the model that analyzed the change variable related to the "Knowledge of Mental Health Referral Process" measure, the key independent predictor variables that were significantly related to this measure at the bivariate level include officer type, sex, race, and volunteer status. The independent variables that were treated as control variables in this model were officer years of service, and prior mental health training. These variables were nested in county of training, which was treated as a random effect in this model. As indicated in Table 9, officer type was the only variable that remained a significant predictor of this immediate training effect measure (β=-

.779, $p < .001$). The dependent variable was based on a four-point continuous scale, therefore a .779 change on this scale translates to a 19% greater increase on this measure among correctional officers when compared to law enforcement officers. As stated previously, law enforcement officers had a significantly higher score than correctional officers on the "Knowledge of Mental Health Referral Process" measure at the pretest, which suggests correctional officers had more to gain from the training on this particular measure.

Table 10: Multilevel Mixed Linear Model, Dependent Variable: "Change in Knowledge of Mental Health Services"

Effect	*β*	*SE*
Type	-.771***	.144
Sex	.235	.152
Race (White)	-.144	.144
Years of Service	-.021*	.009
Prior Mental Health Training	.012	.124
Volunteered for Training	-.068	.157

Note: *= $p < .05$, ***= $p < .001$, Note: Likelihood Ratio Test (6, n=271) = 37.797, $p < .001$

The final multilevel mixed linear model examined the change in "Knowledge of Mental Health Services" measure. The key independent predictor variables included in this model that were significantly related to this measure at the bivariate level were officer type and race. The other independent variables included in this model as control variables were officer sex, years of service, prior mental health training, and volunteer status. County of training was the nesting variable that was treated as a random effect in this model. As illustrated in Table 10, when all other variables were held constant, officer type was still a significant predictor of this immediate training effect measure (β=-.771, $p < .001$). Because the dependent variable is based on a four-

point continuous scale, the .771 difference between correctional and law enforcement officers indicates that correctional officers gained 19% more than law enforcement officers on this measure of training effectiveness. As noted previously, law enforcement officers had a greater "Knowledge of Mental Health Services" at the pretest when compared to correctional officers, which suggests that correctional officers also had more to gain from the training on this measure. Additionally, officers' years of service became a predictor of change on this measure in this model (β=-.021, $p < .05$). This finding suggests that with every one year of service increase, there is a less than 1% decrease in "Knowledge of Mental Health Services."

When examining model fit for each of the multilevel mixed linear models just described, several likelihood ratio tests were conducted comparing the null models to the full models just outlined. The results of the likelihood ratio tests were all significant ($p < .0001$), which suggests that these models are better than the null model at predicting the key outcome measures reflecting the immediate training effects. Because mixed linear modeling was employed to examine the relationships between the independent variables and the immediate training effects, an adjusted R^2 is not available to estimate model fit.

Non-Responders and Responders-Examination of Potential Response Bias

Prior to assessing the intermediate impact of CIT training by incorporating the follow-up survey data, a series of bivariate analyses were conducted to identify differences between the group of officers that responded to the follow-up survey and the group of officers that did not respond to this survey (See Table 11). Identifying differences between these two groups is essential to assessing nonresponse bias and determining the generalizability of the findings. As mentioned previously, out of the 279 officers that responded to the pretest and posttest surveys,

215 provided a valid email address to receive the follow-up survey. A total 117 officers completed the follow-up survey, which represents 42% of the original sample.

Table 11: Testing for Response Bias Involving Officer-Level Characteristics

Variable	*Non-Respondents N*	*Non-Respondents %*	*Respondents N*	*Respondents %*	χ^2
Officer Type					.073
LEO	105	65	74	63	
Correctional	57	35	43	37	
Race					3.560
White	114	70	94	80	
Non-White	48	30	23	20	
Sex					6.020*
Male	136	84	84	72	
Female	26	16	33	28	
Rank					2.277
Patrol/Line	131	82	87	74	
Supervisor	29	18	30	26	
MH Training					5.845*
Yes	77	64	73	49	
No	81	36	42	51	
Volunteer					8.223**
Yes	90	56	82	73	
No	72	44	31	27	
Know Someone					10.247**
Yes	40	25	49	43	
No	122	75	65	57	

Note: *=p<.05, **=p<.01

Several notable differences between respondents and non-respondents on the independent variables were identified using Chi-square analysis, as presented in Table 11. First, females were significantly more likely to respond than males (p <.05). Secondly, officers that reported having previously received mental health training were more likely to respond than officers with no prior mental health training (p <.05). In addition, officers that volunteered for CIT training were

more likely to respond than officers that did not volunteer for CIT training (p <.01). Finally, officers that knew someone with a mental illness were actually less likely to respond to the follow-up survey than officers that did not report knowing someone with a mental illness ((p <.01). The results of the independent samples t-test that was conducted to examine the differences between respondents and non-respondents in terms of years of service were non-significant, indicating years of service was not related to response bias (t (277) =-1.071, p=.285).

It can be determined from this preliminary analysis that the missing data (nonresponse) is not at random, which means the differences between the respondents and non-respondents in terms of sex, prior mental health training, volunteer status, and knowing someone with a mental illness suggests potential sources of bias. Thus, the findings pertaining to these officer-level characteristics and the intermediate training effects may not be generalizable to the entire sample or a broader population with a similar distribution. In addition, it would be difficult to extrapolate the true meaning of findings related to these officer characteristics and the intermediate training effects because this subsample does not proportionately represent the original sample.

While it is important to identify potential sources of response bias in relation to the officer-level independent variables, it is more critical to identify potential bias in terms of the outcome measures. A series of independent samples t-tests were employed to examine the differences between respondents and non-respondents on the dependent variables reflecting the measures of training effectiveness at the pretest, posttest, as well as the change variables representing the growth on the measures between the pretest and posttest data collection points (see Table 12).

Table 12: Testing for Response Bias Involving Measures of Training Effectiveness

	Non-Respondents		Respondents		
Outcome Measure	**M**	**SD**	**M**	**SD**	**t**
Knowledge of Mental Illness					
Pretest	5.76	1.25	6.01	1.14	-1.723
Posttest	6.64	.78	6.70	.69	-.704
Change Variable	.90	1.42	.71	1.30	1.097
Self-Efficacy					
Pretest	15.55	3.82	15.88	3.57	-.719
Posttest	19.36	4.02	19.97	3.77	-.727
Change Variable	3.74	4.81	4.14	4.19	-1.269
Perceptions of Verbal De-escalation					
Pretest	9.59	2.03	10.27	1.50	-.301*
Posttest	10.47	2.25	10.95	2.00	-1.825
Change Variable	.83	2.71	.66	2.24	.560
Perceptions of Mental Health Services					
Pretest	6.24	2.00	6.18	2.24	.249
Posttest	8.22	2.49	7.95	2.45	.890
Change Variable	2.00	2.95	1.72	2.55	.810
Knowledge of MH Referral Process					
Pretest	2.37	.96	2.41	1.08	-.305
Posttest	3.31	.81	3.40	.66	-.898
Change Variable	.97	1.06	.96	1.02	.024
Knowledge of MH Services					
Pretest	2.19	.89	2.17	.95	.184
Posttest	3.29	.79	3.32	.67	-.387
Change Variable	1.12	1.07	1.16	1.02	-.269

Note: *=$p<.05$

The only statistically significant difference between respondents and non-respondents on these measures was identified on the pretest measure of "Perceptions of Verbal De-escalation" ($t(271) = -3.012$, $p < .05$). This finding suggests respondents possessed less favorable attitudes about verbal de-escalation than non-respondents at the beginning of CIT training. However, because the difference between these two groups at the posttest was minimal and no statistically

significant relationship was identified between responding to the follow-up survey and change in "Perceptions of Verbal De-escalation," this difference should not diminish the generalizability of findings pertaining to this measure of training effectiveness using the follow-up survey data

Intermediate Training Effects

The analytical procedures employed to examine the intermediate training effects included only the sample of respondents that completed all three surveys (n=117). A series of paired samples t-tests were performed to assess the mean change between the posttest and follow-up surveys on several measures of training effectiveness. This analytical procedure was only conducted on the three measures that were captured on the follow-up survey using the same questions from the pretest and posttest surveys ("Knowledge of Mental Illness," "Self-Efficacy," and "Perceptions of Verbal De-escalation"). The results of these analyses are presented in Table 13. The remaining two measures of training effectiveness were captured on the follow-up surveying using different questions from the pretest and posttest surveys, which will be addressed following the presentation of the paired samples t-tests results.

Table 13: Intermediate Training Effects (n=117)

Variable	Posttest $\bar{x}$	Follow-Up $\bar{x}$	SD	*t*	df
H1: Knowledge of Mental Illness	6.69 (out of 8)	6.67	.95	.22	95
H2: Self Efficacy	20.12 (out of 24)	14.61	3.90	14.07***	98
H3: Perceptions of Verbal De-escalation	11.03 (out of 12)	7.73	2.61	12.64***	99

Note: *** = $p < .001$

As evidenced in Table 13, no substantial change was identified between the posttest mean and follow-up mean on the "Knowledge of Mental Illness" measure. However, the mean scores

on the other two measures significantly declined between the two data collection points. On average, officers experienced an estimated 22% decline on the "Self-Efficacy" measure. With regard to the "Perceptions of Verbal De-escalation" measure, officers demonstrated an average 28% decrease from the posttest to the follow-up data collection points. The significant declines on these measures represent a diminishing effect, or decay, of the training over time.

Separate variables were created by subtracting the posttest mean from the follow-up mean to represent the changes that occurred between the posttest and follow-up data collection points on the "Knowledge of Mental Illness," "Self-Efficacy," and "Perceptions of Verbal De-escalation" measures. Independent samples t-tests were performed to examine the relationships between the original nine independent variables and these change variables to determine if officer characteristics played a role in the change that occurred between these two time points. The nine independent variables that were tested include officer type, sex, race, rank, previous mental health training, volunteer status, prior exposure to mental illness, and years of service. None of the independent variables were significantly related to the "Knowledge of Mental Illness" or "Self-Efficacy" change variables. However, officer rank and race were significantly related to the "Perceptions of Verbal De-escalation" change variable. Unranked officers lost more ($\bar{x}$ change=-3.62, SD=2.55) than ranked officers ($\bar{x}$ change=-2.44, SD=2.62) on this measure (t(98)=-2.024, p <. 05). In addition, nonwhite officers experienced a greater deterioration ($\bar{x}$ change=-4.59, SD=2.09) than white officers ($\bar{x}$ change=-3.04, SD=2.64) between the posttest and follow-up survey data collection points in terms of their "Perceptions of Verbal De-escalation" (t(98)=-2.280, p <. 05).

As mentioned previously, a correlation matrix was created to examine possible interactions among independent variables that should be considered in the development of multivariate models (Table 3). In addition, a series of Chi-Squared analyses were conducted to confirm the findings pertaining to the categorical variables. Among the subset of officers that responded to the follow-up survey, officer race was associated with officer type, and officer rank was associated with years of service. In addition, officer race and type were associated with volunteer status. A series of Two-Way Between-Group Analysis of Variance (ANOVA) models were tested to determine whether the associated officer-level characteristics translated into interaction effects that impact the posttest-follow-up change variables previously described. As illustrated in Table 14, none of the associations were significant in the ANOVA models suggesting that interaction effects do not need to be built into any multivariate models involving the outcome measures associated with the intermediate training effects. The ANOVA model designed to test the interaction between officer race and volunteer status did not converge because the cell count was less than zero in one aspect of the model because only one non-white officer that responded to the follow-up survey did not volunteer for the training.

Table 14: Two-Way Between Group ANOVA Results (n=117)

Interaction Term	*Df*	*SS*	*MS*	*F*
Knowledge Change				
Type x Race	1	1.586	1.586	1.731
Type x Volunteer Status	1	.063	.063	.065
Rank x Yrs of Service	1	.012	.012	.013
Self-Efficacy Change				
Type x Race	1	.276	.276	.018
Type x Volunteer Status	1	54.600	54.600	3.588
Rank x Yrs of Service	1	18.720	18.720	1.216
Perceptions of Verbal De-Escalation				
Type x Race	1	3.34	3.34	.504
Type x Volunteer Status	1	.127	.127	.019
Rank x Yrs of Service	1	.381	.381	.057

Due to the fact that no significant relationships were identified between the independent variables and the intermediate change variables representing "Knowledge of Mental Illness" and "Self-Efficacy," multivariate models were not created for these variables. However, a multivariate mixed regression model was created to examine the relative predictive power of officer race and rank on the dependent change variable representing the intermediate training effect associated with "Perceptions of Verbal De-escalation." In addition, county-level differences were noted when examining the relationship between county of training and posttest to follow-up mean changes on "Perceptions of Verbal De-escalation." Therefore, county of training was treated as a random effect in the multivariate mixed method modeling procedure.

As indicated in Table 15 below, when controlling for county of training, the significant relationship between officer rank and "Intermediate Change in Perceptions of Verbal De-escalation" disappears. However, officer race remains a significant predictor of this intermediate training effect measure. When assessing goodness of fit, the results of the likelihood ratio test

proved significant (p <.01), which indicates the multilevel mixed model presented below is an improvement to the null model.

Table 15: Multilevel Mixed Linear Model, Dependent Variable: "Intermediate Change in Perceptions of Verbal De-escalation"

Effect	*B*	*SE*
Race (White)	1.40	.660*
Rank (Supervisor)	1.01	.574

Note: *= p <.05
Note: Likelihood Ratio Test (2, n=100) = 9.13, p <.001

To illustrate the overall changes in officers' mean scores over time on "Knowledge of Mental Illness," "Self-Efficacy," and "Perceptions of Verbal De-escalation," several box plots were created. The mean scores and 95% confidence intervals are included in the box plots for each data collection point. The 95% confidence intervals can be interpreted as the range of values that would contain the true population mean 95% of the time if the study were repeated on numerous samples. These figures depict the growth across the three data collection points among the 117 officers that completed all three surveys.

Figure 8 depicts the growth and decline of the officers' mean scores on the "Knowledge of Mental Illness" measure across the three time points. The mean score on this measure at the pretest data collection point was 6.01 with a 95% confidence interval ranging from 5.8 as the lower confidence limit (LCL) to 6.22 as the upper confidence limit (UCL). The mean score on "Knowledge of Mental Illness" increased to 6.70 at the posttest data collection point, with a 95% confidence interval ranging from 6.58 (LCL) to 6.83 (UCL). As mentioned previously, there was virtually no change between the posttest and follow-up data collection point on this measure. The

follow-up mean score on “Knowledge of Mental Illness” was 6.67, with 6.50 as the lower confidence limit and 6.83 as the upper confidence limit. The findings derived from this box plot and the analyses it represents indicate that officers experienced a statistically significant increase in their “Knowledge of Mental Illness” between the pretest and posttest, and this knowledge is largely retained at the follow-up data collection point.

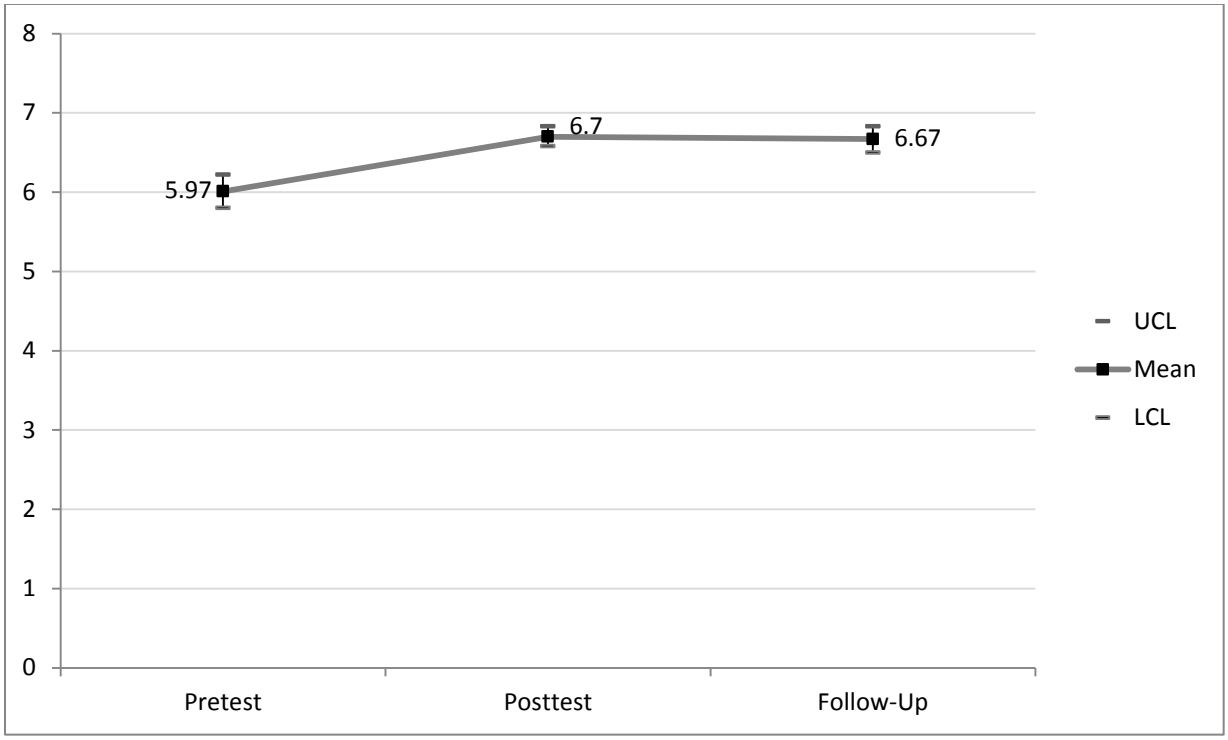


Figure 8: Change in Knowledge of Mental Illness Box Plot

Figure 9 includes the mean scores and 95% confidence intervals for the “Self-Efficacy” measure on the pretest, posttest, and follow-up surveys. The officers’ mean score on this measure at the pretest was 15.88, with a confidence interval ranging from 15.22 (LCL) to 16.54 (UCL). The mean score increased significantly between the pretest and posttest to 19.97, with a 95%

interval ranging from 19.27 (LCL) to 20.66 (LCL). As demonstrated by the follow-up mean score of 14.64 and a confidence interval of 13.96 (LCL) to 15.32 (UCL), officers experienced a statistically significant decrease in their level of "Self-Efficacy" following the completion of CIT training. The decline in "Self-Efficacy" experienced by officers following the completion of CIT training resulted in a follow-up mean score that was lower than the pretest score.

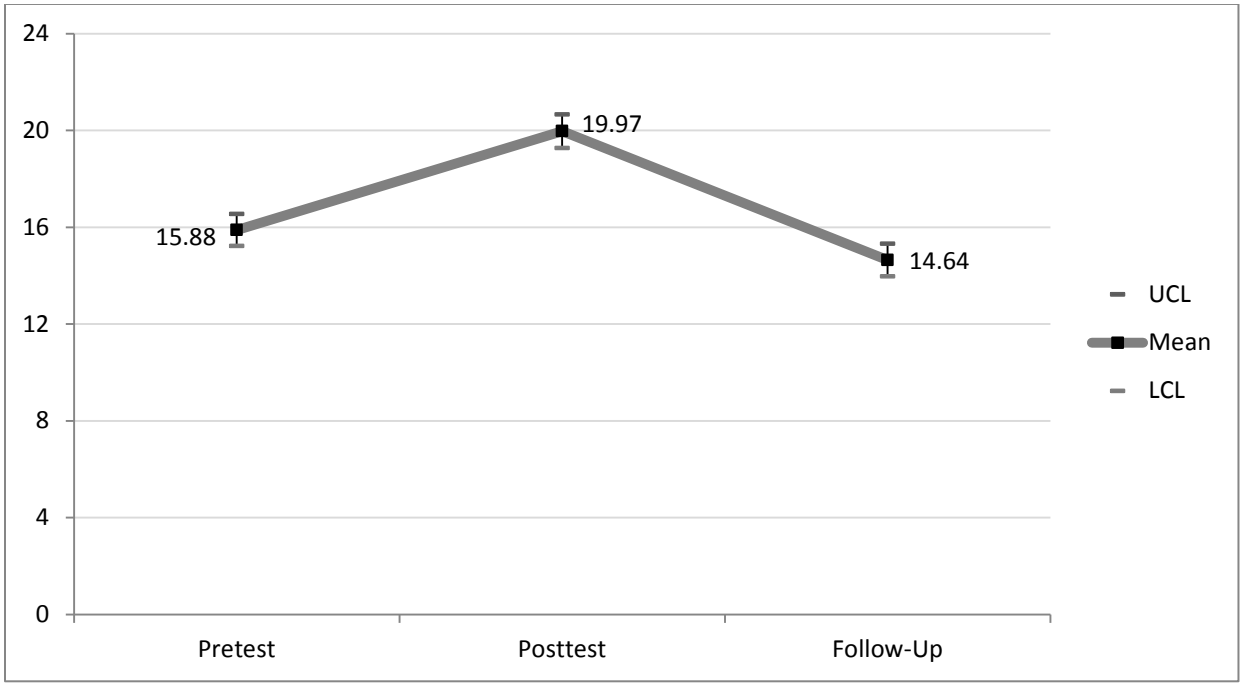


Figure 9: Change in Self-Efficacy Box Plot

The final box plot contained in Figure 10 depicts the mean scores and confidence intervals associated with the three data collection points and the "Perceptions of Verbal De-escalation" measure. The officers' mean score on the pretest for this measure was 10.27, with a 95% confidence interval ranging from 9.99 as the lower confidence limit and 10.55 as the upper confidence limit. The mean score of 10.95 and a confidence interval ranging from 10.58 (LCL)

and 11.32 (UCL) on the posttest indicates a statistically significant increase between the pretest and posttest among officers in terms of their "Perceptions of Verbal De-escalation." However, officers demonstrated a statistically significant decrease on this measure between the posttest and follow-up data collection points, with a follow-up mean score of 7.73 and a confidence interval of 7.36 (LCL) to 8.10 (UCL). Similar to the "Self-Efficacy" change pattern, the mean score on the "Perceptions of Verbal De-escalation" declined on the follow-up survey to a score that was lower than the pretest mean score.

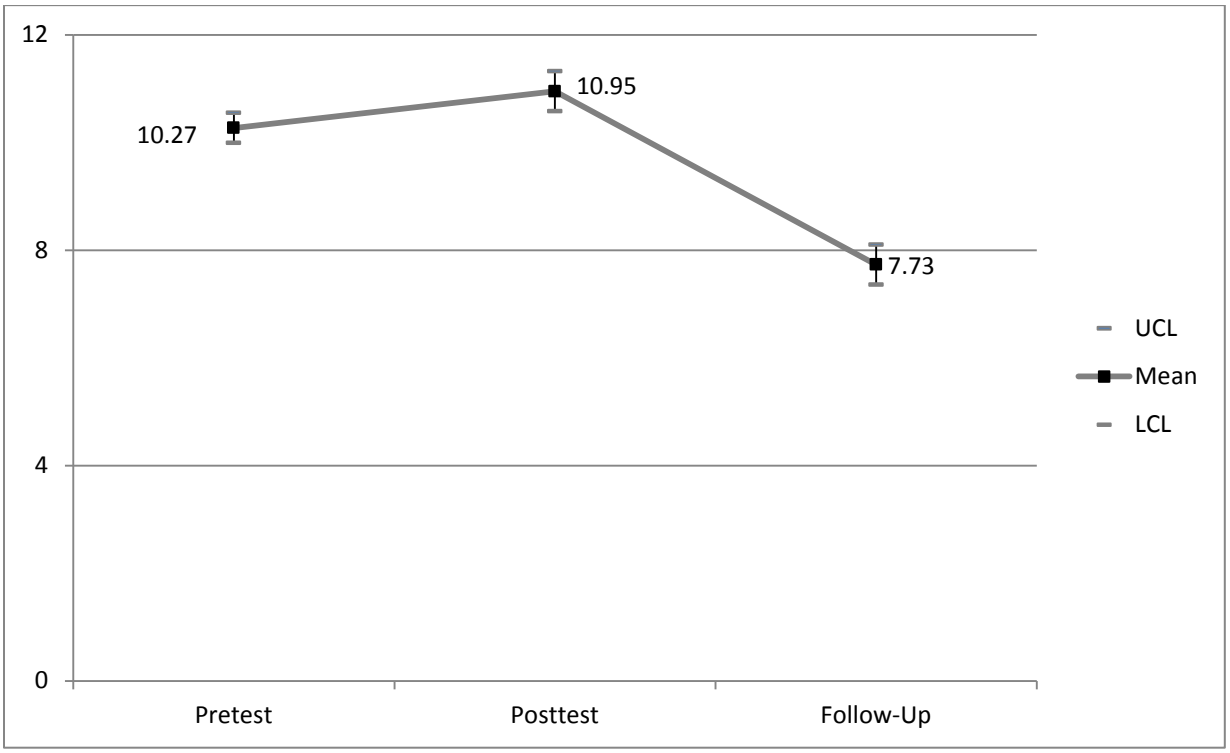


Figure 10: Change in Perceptions of Verbal De-Escalation Box Plot

To further explore the relationship between time and training effectiveness, several linear growth curve models were created using pretest, posttest, and follow-up scores for three

measures of training effectiveness: “Knowledge of Mental Illness,” “Self-Efficacy,” and “Perceptions of Verbal De-escalation. County of training was not included in these growth curve models due to the large amount of data lost between the posttest and follow-up data collection points. The key independent variable for each of these models is Time (pretest, posttest, and follow-up). Each growth curve model also incorporated the independent variables previously identified as predictors of change on the individual outcome measures. As noted previously, prior mental health training, volunteer status, and officer sex were significantly related to Knowledge of Mental Illness and were therefore incorporated into the growth curve model that used this measure as the dependent variable. The only significant predictor of Self-Efficacy identified in the models described previously was officer sex, making it the only independent variable necessary to include in this growth curve model. The two independent variables included in the Perceptions of Verbal De-escalation growth curve model were officer rank and race because they were previously identified as predictors of change on this measure.

The results of the growth curve models are presented in Table 16. As illustrated, Time was a significant predictor of growth in all three models. This finding suggests that officers’ scores pertaining to Knowledge of Mental Illness, Self-Efficacy, and Perceptions of Verbal De-escalation were significantly affected by time. The reference category for Time in the growth curve models was Time 3 (follow-up survey), meaning officers’ scores at Time 1 (pretest) and Time 2 (posttest) were compared to their scores at Time 3 (follow-up survey). As indicated in Table 16, officers’ scores on the Knowledge of Mental Illness measure at Time 1 were significantly lower (9%) than their scores at Time 3. However, officers’ Knowledge of Mental Illness at Time 2 was only slightly greater (less than 1%) than Time 3. The results of the growth

curve model with Knowledge of Mental Illness as the dependent variable align with the findings presented previously regarding the changes that occurred on this measure between the pretest and posttest, and posttest and follow-up data collection points. However, the independent variables previously identified as predictors of change on the Knowledge of Mental Illness measure were not significant in the growth curve model.

Table 16: Growth Curve Models

Effect	*β*	*SE*
Model 1: Knowledge of Mental Illness		
Time 1 (Pretest)	-.694**	.128
Time 2 (Posttest)	.031	.122
Sex (Female)	-.078	.127
Prior Mental Health Training	-.064	.120
Volunteer Status	.074	.126
Model 2: Self-Efficacy		
Time 1 (Pretest)	1.27**	.451
Time 2 (Posttest)	5.39**	.390
Sex (Female)	-1.25	.536
Model 3: Perceptions of Verbal De-escalation		
Time 1 (Pretest)	2.545**	.244
Time 2 (Posttest)	3.227**	.228
Race (Non-White)	.234	.282
Rank (Patrol)	-.074	.250

Note: *= p <.05, **= p <.01
Note: Reference categories for variables: Time 3 (Follow-Up), Sex (Male), Prior mental health (Yes), Volunteer status (Volunteer), Race (White), Rank (Supervisor)
Note: Likelihood Ratio Tests: Knowledge of Mental Illness (5, n=110) = 70.95, p <.001, Self-Efficacy (3, n=117) = 154.65, p <.001, Perceptions of Verbal De-escalation (4, n=117) = 150.26, p <.001

With regard to the Self-Efficacy growth curve model, both Time 1 and Time 2 were significantly different from Time 3. In this model, officers' Self-Efficacy at Time 1 was 5% higher than Time 3, and their Self-Efficacy at Time 2 was 22% higher than Time 3. These

findings support the results previously provided related to changes on the Self-Efficacy measure over time, with one exception. While sex was previously identified as a predictor of change on the Self-Efficacy measure, this finding was not corroborated in the growth curve model.

In the final growth curve model, significant differences were noted between Time 1 and Time 3, as well as Time 2 and Time 3 on the Perceptions of Verbal De-escalation measure. Officers' scores at Time 3 were 21% lower than Time 1 and 27% lower than Time 2. The results of this growth curve model confirm the findings previously outlined pertaining to changes over time on the Perceptions of Verbal De-escalation measure. However, similar to the other growth curve models, the effects of the independent variables on officers' Perceptions of Verbal De-escalation that were previously significant decreased to a non-significant level in this model.

Table 17: Multiple Pairwise Comparisons

Time Points	*Mean Differences*	*SE*
Knowledge of Mental Illness		
Pretest-Posttest	.725**	.116
Pretest-Follow-Up	.694**	.128
Posttest-Follow-Up	-.031	.122
Self-Efficacy		
Pretest to Posttest	4.120**	.371
Pretest to Follow-Up	-1.267*	.451
Posttest to Follow-Up	-5.386**	.390
Perceptions of Verbal De-escalation		
Pretest to Posttest	.673**	.218
Pretest to Follow-Up	-2.554**	.244
Posttest to Follow-Up	-3.227**	.228

Note: *= p <.05, ** p <.01

In addition to creating growth curve models to assess the effect of time on training effectiveness, a series of pairwise multiple comparison analyses were performed using the Sidak adjustment procedure. The results of these analyses are presented in Table 17. The findings related to these multiple comparisons substantiate the results of the growth curve models. In addition to presenting the relationships between Time 1 (pretest) and Time 3 (follow-up) as well as Time 2 (posttest) and Time 3 (follow-up), Table 17 illustrates the mean differences between Time 1 and Time 2 for each measure. As previously described, officers' mean scores on each measure increased significantly between Time 1 and Time 2. These comparisons also confirmed the results from prior analytical procedures that officers' mean scores on Knowledge of Mental Illness decreased slightly between Time 2 and Time 3, while their scores on the other two measures (Self-Efficacy and Verbal De-escalation) decreased significantly between Time 2 and Time 3.

Additional Intermediate Training Effects

As previously mentioned, the questions on the follow-up survey pertaining to the other two measures of training effectiveness, "Perceptions of Mental Health Referral Process and Mental Health Services" and "Knowledge of Mental Health Referral Process and Mental Health Services," were different from the pretest and posttest surveys. Because a significant difference was noted between correctional and law enforcement officers on these measures on the pretest and posttest surveys, the findings are presented separately for both groups of officers. To assess the impact of CIT training on their "Perceptions of Mental Health Services," officers were asked on the follow-up survey to indicate whether CIT improved, worsened, or had no effect on their perceptions of mental health services in the community. As presented in Table 18, only one

correctional officer that responded to the follow-up survey indicated their "Perceptions of Community Mental Health Services" worsened as a result of CIT training, while zero law enforcement officers responded in such a manner. Approximately 25% of the law enforcement respondents and 40% of correctional respondents suggested CIT training had no effect on their "Perceptions of Community Mental Health Services." However, 75% of law enforcement respondents and 57% of correctional respondents indicated CIT training improved their "Perceptions of Community Mental Health Services."

To measure the intermediate training effects associated with "Knowledge of Mental Health Referral Process," officers were asked whether CIT training improved, worsened, or had no effect on their ability to recognize when a Baker Act should be initiated. When responding to this question, none of the officers indicated the training had worsened their "Knowledge of Mental Health Referral Process." An estimated 24% of law enforcement respondents and 49% of correctional respondents suggested CIT training had no effect on their "Knowledge of Mental Health Referral Process." The remaining 76% of law enforcement respondents and 51% of correctional respondents selected "Improved" when asked the impact of CIT training on their ability to recognize when a Baker Act should be initiated.

Officers were also asked to indicate whether CIT training improved, worsened, or had no effect on their understanding of the entire mental health referral process. This question is being used to measure the impact of CIT training on officers' "Knowledge of Mental Health Services." None of the officers that responded selected "Worsened" as their answer to this question. An estimated 14% of law enforcement respondents and 38% of correctional respondents suggested their understanding of the mental health referral process was the same after CIT training as it was

before they attended the training meaning CIT training had no effect on their understanding of the mental health services. The remaining 86% of law enforcement respondents and 62% of correctional respondents indicated CIT training improved their understanding of the mental health services.

Table 18: Intermediate Training Effect- Knowledge and Perceptions of Mental Health Referral Process and Services (n=100)

	Correctional Officers		Law Enforcement Officers	
Measure	*N*	*%*	*N*	*%*
Perceptions of MH Services				
Worsened	1	3	0	0
Stayed the Same	15	40	16	25
Improved	21	57	47	75
Knowledge of MH Referral				
Worsened	0	0	0	0
Stayed the Same	18	49	15	23
Improved	19	51	48	76
Knowledge of MH Services				
Worsened	0	0	0	0
Stayed the Same	14	38	9	14
Improved	23	62	54	86

To summarize the intermediate training effects, officers experienced very little change on the "Knowledge of Mental Illness" measure indicating that the knowledge gained in CIT training was largely retained in the follow-up period. However, the officers demonstrated a significant decline on the "Self-Efficacy" and "Perceptions of Verbal De-escalation" measures to the extent that the follow-up mean scores were lower than the pretest mean scores. The majority of officers reported that their "Perceptions of Mental Health Services" improved as a result of CIT training.

The responses to the question pertaining to "Knowledge of Mental Health Services" were similar in that the most officers indicated this also improved following the completion of CIT training. Finally, the responses to the question utilized in the follow-up survey to measure "Knowledge of Mental Health Referral Process" revealed that the majority of officers experienced an increase on this intermediate training measure as well.

Examining the Diversionary Objective of CIT Training

As an additional component of the training evaluation component of this study, officers were asked several questions pertaining to the nature and extent of their encounters and interventions involving persons with a mental illness. As mentioned previously, officers were asked at the pretest and follow-up data collection points to indicate how many times in the last month they encountered a person or inmate with a mental illness in a number of different scenarios. Law enforcement officers were asked how many times they encountered a person with a mental illness as a victim of a crime, as a witness to a crime, as a suspected offender, as a subject of a call for assistance, and as a danger to themselves or others. Correctional officers were asked how many times in the last month they encountered an inmate with a mental illness in the following scenarios: as a victim (of an attack, exploitation, etc.), as a perpetrator (of an attack, exploitation, etc.) on another inmate, as a perpetrator of an attack on a correctional officer, as a subject of a rule violation, and as a danger to themselves. Officers' responses were summed for all scenarios to calculate descriptive statistics for the total number of encounters.

Officers were also asked on the pretest and follow-up surveys to indicate how many times and in what manner they intervened in situations involving persons with a mental illness. Law enforcement officers were asked how many times in the last month they intervened in a situation

involving a person with a mental illness and took no action, initiated a mental health referral, or initiated an arrest. Correctional officers were asked to indicate how many times in the last month they intervened in a situation involving an inmate with a mental illness and took no action, initiated a mental health referral in the institution, or initiated a disciplinary action. Officers' responses to the intervention questions were summed to calculate descriptive statistics for total number of interventions.

One purpose of asking these questions was to determine whether completing CIT training had any impact on the frequency with which law enforcement and correctional officers encounter individuals with a mental illness in their respective job duties. In essence, these questions seek to ascertain whether CIT improves officers' ability to recognize mental illness among individuals they encounter and if they are being more frequently utilized as first-responders to situations involving persons with a mental illness after they complete CIT training. In addition, because CIT is intended to be a criminal justice diversionary model, it is hypothesized that once completing CIT training, officers will report increased rates of mental health referral interventions and decreased rates of interventions that result in arrests or disciplinary actions. The descriptive statistics for the law enforcement encounters and interventions on the pretest survey are presented in Table 19 and the follow-up survey results are found in Table 20. The descriptive statistics reflecting the responses of correctional officers on the pretest survey are provided in Table 21 and the results for the follow-up surveys are illustrated in Table 22. The substantial number of officers that answered zero to each scenario skewed the measures of central tendency, therefore; the mean, median, and mode provided in these tables summarize the non-zero responses.

Table 19: Law Enforcement Encounters & Interventions (Pretest)

Scenario	Mean	SD	Minimum	Maximum	N	Responded zero (%)
As a Victim	1.90	1.30	0	6	66	49
As a Witness	1.42	1.16	0	5	66	73
As an Offender	1.97	1.63	0	8	66	45
Needing Assistance	3.16	2.70	0	14	66	28
As a Danger	2.43	1.53	0	8	66	23
Total Encounters	6.75	5.05	0	23	66	8
Intervene: No Action	2.29	1.73	0	8	65	42
Intervene: MH Referrals	2.45	1.65	0	8	65	28
Intervene: Arrests	1.18	.40	0	2	65	73
Total Interventions	3.88	3.29	0	17	65	19

Table 20: Law Enforcement Encounters & Interventions (Follow-Up)

Scenario	Mean	SD	Minimum	Maximum	N	Responded zero (%)
As a Victim	2.54	3.72	0	20	74	65
As a Witness	1.91	1.22	0	5	74	85
As an Offender	2.00	1.80	0	10	74	59
Needing Assistance	3.88	6.33	0	40	74	35
As a Danger	2.62	2.24	0	10	74	32
Total Encounters	6.93	10.66	0	78	74	9
Intervene: No Action	2.62	2.75	0	12	74	49
Intervene: MH Referral	2.32	1.88	0	10	74	39
Intervene: Arrest	1.43	.65	0	3	74	81
Total Interventions	3.84	4.39	0	21	74	22

As evidenced by Table 19, law enforcement officers reported encountering persons with a mental illness nearly seven times in the month prior to CIT training. The most frequently cited scenario in which law enforcement officers reported encountering persons with a mental illness was when these individuals were subjects of calls for assistance ($\bar{x}$ = 3.16, SD=2.70). The scenario receiving the second highest number of reported encounters in the month prior to CIT

training was a person with a mental illness posing a danger to themselves or others ($\bar{x}$ =2.43, SD=1.53). On the pretest survey, law enforcement officers reported intervening in situations involving a person with a mental illness in nearly 57% of their encounters. The average number of interventions reported by officers that resulted in the removal of an individual with a mental illness with no formal action was similar to the mean number of reported interventions that resulted in a mental health referral. Law enforcement officers only reported an average of one arrest in the month prior to the training as the outcome of an intervention involving a person with a mental illness. As illustrated in Table 20, the law enforcement responses on the follow-up survey virtually mirror the pretest surveys.

As indicated in Table 21, on the pretest survey, correctional officers reportedly encountered inmates with a mental illness an average of fourteen times in the month prior to attending CIT training. The correctional officers reported most frequently encountering inmates with a mental illness in situations in which the inmate was the perpetrator of an attack or exploitation of another inmate ($\bar{x}$ =7.12, SD=14.93). The second highest reported scenario in which correctional officers encountered inmates with a mental illness was when these inmates were subjects of rule violations ($\bar{x}$ =6.42, SD=7.01). In terms of interventions, this sample of correctional officers reportedly intervened in approximately 70% of their encounters with inmates with a mental illness. The initiation of a mental health referral in the correctional institution was the most commonly reported outcome of the interventions ($\bar{x}$ =6.86, SD=13.41), followed by no formal action ($\bar{x}$ =4.95, SD=7.69), and the initiation of a formal disciplinary action ($\bar{x}$ =3.00, SD=2.05).

Table 21: Correctional Officer Encounters & Interventions (Pretest)

Scenario	Mean	SD	Minimum	Maximum	N	Responded zero (%)
As a Victim	2.79	2.02	0	7	41	51
As a Perpetrator on Inmate	7.12	14.93	0	64	41	56
As a Perpetrator on Officer	2.67	2.57	0	10	41	67
Rule Violation	6.42	7.01	0	30	41	19
As a Danger to Self	3.76	4.55	0	20	41	28
Total Encounters	14.24	18.75	0	107	41	9
Intervene: No Action	4.95	7.69	0	30	39	44
Intervene: MH Referral	6.86	13.41	0	70	39	26
Intervene: Disc Action	3.00	2.05	0	7	39	67
Total Interventions	10.00	18.29	0	100	39	14

Table 22: Correctional Officer Encounters & Interventions (Follow-Up)

Scenario	Mean	SD	Minimum	Maximum	N	Responded zero (%)
As a Victim	1.83	1.19	0	4	43	72
As a Perpetrator on Inmate	4.80	5.83	0	20	43	77
As a Perpetrator on Officer	1.82	2.09	0	8	43	74
Rule Violation	7.00	9.97	0	50	43	35
As a Danger to Self	2.56	2.45	0	12	43	42
Total Encounters	9.46	13.26	0	75	43	14
Intervene: No Action	3.14	4.44	0	20	42	47
Intervene: MH Referral	2.95	4.25	0	20	43	56
Intervene: Disc Action	2.10	1.66	0	6	43	77
Total Interventions	5.14	7.87	0	40	42	33

With regard to the follow-up survey, correctional officers reported a lower frequency of encounters and subsequent interventions than they reported on the pretest survey. With an average of ten encounters, this sample of correctional officers reported rule violations as the most common scenario encountered involving inmates with a mental illness ($\bar{x}$ =7.00, SD=9.97). The mean number of encounters involving inmates with a mental illness as the perpetrator of an attack or exploitation on another inmate was the second highest reported

scenario ($\bar{x}$ =4.86, SD=5.83). Similar to the pretest survey, correctional officers reportedly intervened in 54% of their encounters involving inmates with a mental illness. However, the distribution of intervention type differed slightly from the pretest. The mean number of interventions in which an inmate was removed from the situation with no formal action ($\bar{x}$ =3.14, SD=4.44) was similar to the mean number of interventions that resulted in the initiation of an institutional mental health referral, ($\bar{x}$ =2.95, SD=4.25). The correctional officers reported a slightly lower mean frequency of interventions that resulted in the initiation of a disciplinary action when compared to the pretest and the other types of interventions ($\bar{x}$ =2.10, SD=1.66).

A series of bivariate analyses were employed to examine the relationships between the frequency of total encounters and total interventions on the pretest and posttest data collection points. Two significant differences were identified among the group of law enforcement officers, whereas no significant differences were found among the group of correctional officers. The results of an independent samples t-test revealed law enforcement officers with prior mental health training reported a significantly higher mean frequency of encounters with persons with a mental illness on the pretest survey ($\bar{x}$ =7.69, SD=5.61) when compared to officers with no prior mental health training ($\bar{x}$ =5.05, SD=3.39)(t(53) -2.22, *p* ,.05). In addition, law enforcement officers that reported knowing someone with a mental illness reported a lower frequency of interventions on the pretest survey ($\bar{x}$ =2.81, SD=2.25) than officers that did not report knowing someone with a mental illness.

The results of these analyses indicate very little difference between the pretest and follow-up survey responses of law enforcement and correctional officers in terms of the frequency with which they encounter and intervene in situations involving persons or inmates

with a mental illness. These findings shed light on the scenarios that typically prompt encounters and interventions among law enforcement officers and citizens with a mental illness in the community, as well as correctional officers and inmates with a mental illness in correctional facilities. The frequency with which law enforcement and correctional officers encounter persons or inmates with a mental illness did not change significantly between the pretest and follow-up time points, which suggests completing CIT training does not increase officers' likelihood of being utilized as first-responders to these situations. In addition, the reported rates of arrests/disciplinary actions and mental health referrals were similar for the pretest and follow-up surveys. Therefore, the present study cannot provide supporting or opposing evidence related to the effectiveness of the diversionary element of CIT training.

CHAPTER 5: METHODOLOGY AND RESULTS SECTION B-DIFFUSION AND INSTITUTIONALIZATION COMPONENT

The second prong of the current study utilized the theoretical framework presented earlier to explore the diffusion and institutionalization of the Memphis Crisis Intervention Team model. This component of the study sought to identify the key factors that facilitated the diffusion of the CIT model throughout the nine Florida counties included in the study. In addition, the extent to which the CIT model has become an institutionalized practice in the sampled law enforcement and correctional agencies was also assessed. The diffusion and institutionalization research is primarily exploratory and descriptive.

Research Questions

The two primary research questions addressed in this component of the study include:

- What factors facilitate the diffusion of the Memphis CIT model throughout a specific geographical area?
- To what extent has CIT become an institutionalized practice in agencies represented in the study?

The hypotheses pertaining to the diffusion and institutionalization of the CIT model reflect the theoretical framework previously outlined:

- Diffusion

  H1: Tragic events trigger the diffusion of the CIT model.

  H2: Interagency communication facilitates the diffusion of the CIT model.

  H3: External forces play a key role in the diffusion of the CIT model.

- Institutionalization:

  H1a: Agencies that have implemented CIT engage in ongoing evaluation of the training program.

  H1b: Agencies that have implemented CIT engage in ongoing evaluation of the overall impact of the program.

  H2: Agencies that have implemented CIT have assigned staff to manage the program.

  H3: Agencies that have adopted the CIT model have a written CIT policy to guide decision-making.

  H4: Agencies that have implemented CIT have allocated financial resources to sustain the program.

  H5: Most members of adopting agencies perceive CIT favorably.

Research Design

To examine the diffusion and institutionalization of the Memphis CIT model within the counties included in this study, an online survey was constructed using the online survey development software Qualtrix. A link to the survey was distributed via email to the agency representatives between October and December 2012. This survey consists primarily of open-ended questions and is included in Appendix A.

Measures

As mentioned previously, the two major constructs examined in this component of the study are diffusion and institutionalization. The three hypotheses tested to measure diffusion

were derived from the theoretical framework laid forth by Davis et al., 2005 that utilized organizational theory to describe dramatic change within an organizational field as a social movement. In addition, tenets of institutional theory were interwoven to explain the process by which change occurs within an organizational field. In the current study, the diffusion of the Memphis Crisis Intervention (CIT) model was framed as a social movement that has altered the manner in which criminal justice organizations have chosen to respond to incidents involving persons with a mental illness.

The questions included on the agency representative survey reflect certain aspects of the theoretical framework previously outlined. To assess program diffusion, the following short-answer questions were included on the agency-representative survey:

1) Did a tragic or controversial event involving a person with a mental illness prompt your agency to implement CIT? If yes, please explain.
2) Did communication with other criminal justice agencies play a role in your agency's decision to implement CIT? If yes, please explain.
3) Did mental health providers and/or advocacy groups influence your agency's decision to adopt the CIT model? If yes, please explain.

The first question above corresponds to the "reactive mobilization" aspect of the Davis et al. (2005) paradigm. This piece of the theoretical framework is rooted in the notion that organizations have a desire to maintain stability, meaning they possess a basic survival instinct. When a destabilizing (or tragic) event occurs that threatens the stability of an organization, administrators often respond by initiating "reactive mobilization," or the adoption of an innovative response to the destabilizing event. The original Memphis Crisis Intervention Team

(CIT) program emerged in response to a fatal police shooting of a person with a mental illness (i.e. a tragic, controversial event). Therefore, the present study tests the hypothesis that agencies choose to adopt this model in response to a tragic or controversial event that threatens the stability of their organization.

The second question included in the agency representative survey assessing the diffusion of CIT pertains to communication among "institutional actors," an essential component of both institutional theory and the Davis et al. (2005) paradigm. According to Davis et al. (2005), communication among "dominants" (i.e. organizational leaders) facilitates organizational change. In institutional theory, interagency communication plays a key role in institutional isomorphism. As this relates to the diffusion of the CIT model, the current study tests the hypothesis that communication across agencies prompts mimetic isomorphism, resulting in the widespread adoption of this model and homogeneity throughout the organizational field of criminal justice.

The final question examining the diffusion of CIT focuses on the role of external forces in the decision to adopt this model. In the theoretical framework previously outlined, Davis et al. (2005) noted external actors and the external social environment are key facilitators of organizational change. From the institutional theory perspective, external forces influence organizations within a field to assimilate through coercive isomorphism. With regard to the diffusion of CIT, the initial development of CIT was largely prompted by the National Alliance of Mental Illness, a mental health advocacy organization. In addition, local mental health providers are essential collaborators and contributors in the CIT model. The current study seeks

to ascertain whether mental health advocates and/or mental health providers influenced the decision to adopt the CIT model among the agencies included in this sample.

As mentioned previously, the successful culmination of the diffusion of an innovation is institutionalization. Thus, the organizational changes that were measured as indicators of the institutionalization of the CIT model were conceptualized as consequences of diffusion or the outcomes of the social movement. The measures of institutionalization captured in this study include:

1) How does your agency evaluate the CIT training curriculum?
2) How does your agency evaluate the overall impact of the CIT program on your departmental response to mental health crises?
3) Has your agency assigned staff to manage the CIT program? If yes, is it a full-time position or one among other duties? What are their responsibilities?
4) Does your agency have a dedicated line item in their annual budget to support the CIT program? (Yes/No/Don't Know)
5) Does your agency have a formal written CIT policy? (Yes/No Don't Know)
6) Is the CIT model perceived favorably by most supervisors in your department? (Yes/No Don't Know)

The questions listed above represent several indicators of institutionalization outlined by Katz & Kahn (1978). According to Katz and Kahn (1978), certain changes occur within the organizational structure to accommodate the internalization of an institutionalized practice. Therefore, changes to organizational structure that occur following the adoption of an innovative program can be conceptualized as indicators of institutionalization. The current study

incorporated several measures of institutionalization reflecting the framework asserted by Katz and Kahn (1978) to assess the degree to which the CIT model has become an institutionalized practice in the criminal justice agencies included in the sample.

The first question related to institutionalization included in the survey administered to agency representatives pertains to changes in the organization's program routines. As stated by Katz and Kahn (1978), an organization modifies its program routines by incorporating planning, monitoring and evaluation into the organizational structure to accommodate an institutionalized practice. To measure this indicator of institutionalization in the present study, agency representatives were asked to provide a short-answer response summarizing the manner in which their organization evaluates the CIT training curriculum. A separate question was included to ascertain the manner in which they evaluate the overall impact of the CIT model. The second change to organizational structure that is utilized as an indicator of institutionalization in this study involves investment in program maintenance. One measure associated with organizational investment in program maintenance cited by Katz and Kahn (1978) is assigning staff to sustain the program. To measure this indicator of institutionalization, the current study asked representatives to indicate whether their organization assigned staff to manage the program and whether this position was part-time or one among many other duties.

The third measure of institutionalization included on this survey reflects the assertion by Katz and Kahn (1978) that an organization's policies and procedures are modified to internalize an institutionalized practice. In the current study, agency representatives were requested to respond to a question asking about the existence of a formal written CIT policy within their organization. The survey also asked agency representatives whether their organizations dedicated

a line item in their annual budget to the CIT program. Katz and Kahn (1978) argued that the allocation of organizational resources was a key indicator of the internalization of an institutionalized practice.

The final measure included on this survey pertains to one of the most commonly cited features of institutionalization noted throughout the literature, legitimacy (Goodman, Bazerman, & Conlon, 1980; Goodman & Steckler, 1989; Colyvas & Jonsson, 2011; Suchman, 1995). As stated by Suchman (1995), legitimacy is "a generalized perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definitions" (pg. 308). According to Katz and Kahn (1978) an institutionalized practice receives normative supports, such as staff acceptance and administrative commitment. Within an organization, legitimacy can be conceptualized as widespread acceptance and sustained belief in a policy or practice. To assess legitimacy in the current study, agency representatives were asked whether most members of their organization held favorable perceptions of the CIT program.

Sampling

The sample for the diffusion and institutionalization component of the study was constructed in the same fashion as the sample for the program evaluation component, using a convenience sampling technique. This sample is comprised of representatives from law enforcement and correctional agencies in the nine Florida counties included in the study. Communication was initiated with the countywide CIT coordinators to construct a list containing contact information for the individual law enforcement and correctional agency representatives responsible for answering CIT-related officer questions and managing the program in their

counties. Thus, the sample consists of representatives from individual law enforcement and correctional agencies that participate in CIT in the nine Florida counties in which officers were surveyed for the training evaluation component of the study. A link to the online survey was distributed via email to 33 individuals representing 27 law enforcement and correctional agencies.

Confidentiality/IRB

The survey instrument utilized in this component of the study has also been approved by the UCF Institutional Review Board. The approval letter and the consent form are included at the end of Appendix B. To maintain the confidentiality of the responses to the questionnaires, the respondents were asked to create a Unique ID using the first two letters of the high school they attended, the day of the month on which they were born, and their middle initial or "x" if they do not wish to provide their middle initial.

Results

The online survey was distributed to 33 individuals representing 27 law enforcement or correctional agencies. The agencies represented by the individuals that received the surveys include six Sheriff's departments that also administer the local jail, three jails administered by a County Commission, and eighteen local law enforcement agencies. The individual response rate was 75% with 25 representatives completing the survey, which accounted for 81% or 22 of the agencies surveyed. Six of the respondents represented a local Sheriff's department responsible for oversight of the local jail, meaning they provided responses from both the law enforcement and correctional perspective. In addition, one respondent represented a County Commission-run

jail and the remaining eighteen individuals represented local law enforcement agencies. The units of analysis for this component of the study are the criminal justice organizations represented in the sample

Procedure

As mentioned previously, the questions contained in the survey administered to representatives of law enforcement and correctional agencies were primarily open-ended. Therefore, content analysis was the main analytical procedure utilized to answer the research questions pertaining to this component of the study. The grounded theory approach was utilized to guide the content analysis of the survey responses. Grounded theory methodology uses data gathering and analysis to construct theory or elaborate on an existing theoretical framework (Strauss & Corbin, 1990; Denzin & Lincoln, 1994). The coupling of the social movement framework and institutional theory to explain the diffusion and institutionalization of a practice has not been previously tested empirically. Therefore, grounded theory content analysis was utilized to test the extent to which this theoretical framework accurately describes the diffusion and institutionalization of the CIT program.

Among the particular components of grounded theory that were employed in the analysis of this data was the identification of patterned responses. The responses of the surveys were copied from the online survey software Qualtrix into a Microsoft Word document for review. The responses were scanned for commonalities pertaining to the measures of diffusion and institutionalization previously outlined. These commonalities were grouped and counted by hand as part of the content analysis process. Descriptive analytical procedures were performed to generate a profile of the identified commonalities.

Analysis

Diffusion

For each of the questions pertaining to diffusion and institutionalization, the content of the responses were examined for patterns. These patterns were identified, categorized, and counted for each measure previously outlined. The questions associated with the theoretical framework pertaining to the diffusion of CIT asked agency representatives to indicate whether a tragic event, interagency communication, and/or mental health providers/advocates influenced their agency's decision to adopt the CIT model. If they responded "yes," they were asked to provide an explanation of their response. These explanations were examined using content analysis to identify and categorize patterns in responses.

When asked whether a controversial or tragic event prompted their agency to adopt the CIT model, six officers responded "yes." Three patterns emerged from the explanations provided. One representative indicated a tragic incident occurred in their agency to prompt the adoption of CIT, in which a person with a mental illness was killed during a SWAT encounter. Two agency representatives suggested their agencies decided to adopt CIT in response to an incident in a neighboring county in which a law enforcement officer was killed when responding to a situation involving a person with a mental illness. Finally, three agency representatives indicated high-profile incidents such as the Virginia Tech tragedy and the incident that occurred in Memphis that sparked the original creation of the model prompted their agencies to adopt the CIT model.

Three patterns were also evident among the explanations provided by the sixteen representatives that responded "yes" to the question asking them whether interagency communication facilitated the adoption of the CIT model in their agency. Fourteen representatives suggested communication with neighboring agencies played a role in their agency's decision to adopt the CIT model. One representative indicated communication with the individuals from Memphis spurred the adoption of the CIT model in their agency. The final representative implied communication with State and National law enforcement agencies prompted their agency to adopt the CIT model.

When asked whether communication with mental health providers or mental health advocates influenced their agencies' decision to adopt the CIT model, fifteen representatives responded "yes." Three categories or patterns were found in their detailed explanations. Five representatives indicated communication with mental health providers facilitated the adoption of the CIT model in their agency, while three representatives suggested communication with mental health advocates (NAMI) influenced their agency's decision to adopt the CIT model. The remaining seven representatives indicated communication with both mental health providers and mental health advocates collectively played a key role in their agencies' decision to adopt the CIT model.

The seven respondents that represented a correctional agency were also asked what prompted their organization to begin training correctional officers. Two themes stemmed from their responses to this open-ended question. Two individuals indicated their agency began training correctional officers at the beginning of program implementation, meaning correctional officers have been included in the CIT training program since the agency originally adopted the

CIT model. The remaining five agency representatives suggested their organizations began training correctional officers when they recognized the content of the training "would be beneficial for corrections staff," due to the prevalence of mental illness among their respective jail populations. Table 23 illustrates the findings related to the diffusion aspect of this study.

Table 23: Diffusion of CIT-Patterned Responses (n=25)

Diffusion Element	*N*	*%*
Tragic Event	6	24
Incident in Agency	1	4
Incident in Neighboring Agency	2	8
High-profile Incident	3	12
Interagency Communication	16	64
Neighboring Agencies	14	56
Memphis	1	4
State & National Agencies	1	4
External Communication	15	60
Mental Health Providers	3	12
Mental Health Advocates	5	20
Both MH Providers & Advocates	7	28
Diffusion to Corrections	7	100
Been training COs since beginning	2	29
Recognized importance	5	71

Further content analysis revealed the factors associated with the diffusion of the CIT model tested in this study are not mutually exclusive. Instead, these factors appear to work together to facilitate the diffusion process, which provides further support for the social movement theoretical framework previously detailed. A social movement is a fluid process that involves an assortment of factors collectively contributing to the circulation of an idea or policy.

As this applies to diffusion, numerous factors interweave to spread an innovation throughout an organizational field. In the current study, a tragic event, interagency communication, and external forces (mental health providers and advocates) were conceptualized as key factors in the diffusion of the CIT model throughout the field of criminal justice.

When testing the extent to which these concepts overlap, three agency representatives cited both a tragic event and communication with other criminal justice agencies as factors that played key roles in their agencies' decision to adopt the model. Six agency representatives indicated the decision to adopt the CIT model in their agency was influenced by both a tragic event and pressures exerted by mental health providers/advocates. The most commonly reported combination of diffusion factors was communication with other criminal justice agencies partnered with pressures exerted by mental health providers/advocates. This combination of factors was mentioned by eleven agency representatives. Finally, all three diffusion factors were cited as facilitators of program adoption by three agency representatives.

Institutionalization

Several questions were included on the agency representative survey to assess the degree to which the CIT model has become institutionalized in the criminal justice agencies included in the sample. These questions measure the changes made to the organizational structure to internalize the CIT model as indicators of institutionalization. Similar to the diffusion aspect of the study, responses to the open-ended questions pertaining to institutionalization were examined to identify, categorize, and count patterns. Additional questions pertaining to institutionalization elicited simple "yes," "no," or "don't know" responses. One person discontinued the survey following the completion of the diffusion questions, thus the sample size for the

institutionalization piece of the study is twenty-four agency representatives. The findings derived from the content analysis pertaining to CIT institutionalization are presented in Table 24.

Table 24: Institutionalization of CIT-Patterned Responses (n=24)

Institutionalization Indicators	*N*	*%*
Training Evaluation	17	71
In-Class Evaluations	8	33
Feedback from Attendees	4	17
Collaborative County-Wide Effort	3	13
In-Class Monitoring and Record-Keeping	2	8
Evaluation of Program Impact	15	63
CIT Tracking Forms	8	33
Informal Anecdotal Evidence	7	30
Assigned Staff	18	75
Part-Time	3	13
One Among Other Duties	15	63
Dedicated Budget Line Item		
Yes	2	8
No	19	79
Don't Know	3	13
Formal Written CIT Policy		
Yes	16	67
No	7	30
Don't Know	1	<1
Perceived Favorably		
Yes	19	79
No	2	8
Don't Know	3	13

As indicated in Table 23, the content analysis revealed four patterns among the responses to the question that asked agency representatives how they evaluate the CIT training curriculum.

Eight representatives indicated they distribute evaluations during the training sessions that they later assess to evaluate their training program. Feedback from attendees was cited by four representatives as a means employed to evaluate the training program. In addition, three representatives described their evaluation process as a collaborative effort that involves meetings among CIT committee members and local CIT coordinators. The final method of evaluation mentioned by two representatives included record keeping and in-class monitoring of officers' receptivity to different components of the training. In total, seventeen agency representatives indicated their agency does engage in ongoing evaluation of the training curriculum.

An additional question asked representatives how their agencies evaluate the overall impact of the CIT program on the departmental response to mental health crises. Two themes emerged from the responses provided by the fifteen respondents that suggested their agencies have a process by which they evaluate the impact of the CIT program in their jurisdiction. Eight agency representatives responded in a manner that indicated they utilize official reports filed by officers or CIT tracking forms to evaluate the impact of the program. The forms they referred to are typically completed by CIT-trained officers once they respond to a CIT-related call for service. In some jurisdictions, these forms are only filled out when a mental health referral is initiated. Whereas, in other jurisdictions CIT-trained officers are required to complete them any time they respond to a mental health crises. The information contained in these forms includes details about the incident, characteristics of the subject, use of force, and disposition of the situation. The other evaluation method cited by seven agency representatives entailed the use of informal anecdotal communication with officers and consumers to examine the overall impact of the CIT program.

The third change to organizational structure measured as an indicator of institutionalization in the current study pertains to investment in program maintenance. Agency representatives were asked whether their organizations assigned staff to manage the CIT program, and whether this position was full-time or one among other duties. Among the eighteen agency representatives that indicated their agency did assign someone to manage the CIT program, two suggested this position was part-time. The remaining fifteen agency representatives indicated that the responsibility of managing the CIT program was one among many other duties assigned to particular individuals in their agencies.

Three additional questions were included on the agency representative survey to assess the degree of CIT institutionalization in which they were given three possible response categories: "yes," "no," or "don't know." The first question asked agency representatives whether their organization had a dedicated line item in their annual budget to support the program. This question was intended to measure resource allocation. Only two representatives indicated they were aware of a dedicated line item in their agency's budget to support the CIT program. Three agency representatives selected "don't know," and the remaining nineteen representatives that responded to the question indicated their agency does not have a dedicated line item in their budget to support the CIT program.

The second multiple choice question included on the survey pertaining to institutionalization asked agency representatives whether their organization has created a written CIT policy to guide decision-making in this area. Sixteen agency representatives responded "yes" to this question, suggesting their agencies do have a formal written CIT policy. An additional seven representatives indicated their agency does not have a formal written CIT

policy, while one representative did not know the answer to this question. Finally, agency representatives were asked whether the CIT model is perceived favorably by most supervisors in their department. This question taps into program legitimacy and normative support for the CIT model. Nineteen representatives indicated that most supervisors in their agencies perceive the model favorably, with only two representatives responding "no" to this question, and three indicating they do not know whether the model is perceived favorably by supervisors in their organization. The findings pertaining to the institutionalization component of this study indicate criminal justice organizations modify their structures in a number of different ways following the adoption of the CIT model, suggesting this model has become an institutionalized practice among the agencies included in this study.

CHAPTER 6: DISCUSSION

The current study employed a mixed-methods analytical strategy to examine the effectiveness, diffusion, and institutionalization of the Memphis Crisis Intervention Team (CIT) model in nine Florida counties. A series of quantitative analytical procedures were utilized to evaluate the effectiveness of the CIT training curriculum. The qualitative and exploratory piece of the study tested the previously outlined theoretical framework to identify factors that facilitate the diffusion of the CIT model and assess the extent to which CIT has become an institutionalized practice in the criminal justice agencies included in this sample.

Training Program Evaluation

The first research question addressed in this study examined the extent to which the CIT training curriculum is achieving the intended officer-level objectives. Using prior research and written training objectives provided by the Florida CIT Coalition as guidance, six hypotheses were constructed to measure the effectiveness of the training curriculum:

H1: CIT training will increase officers' knowledge of mental illness

H2: Officers' knowledge of mental health resources in the community and the mental health referral process will increase upon completion of CIT training.

H3: Officers will experience an increase in their perceived level of self-efficacy when managing mental health crises upon completion of CIT training.

H4: Officers' perceptions of verbal de-escalation will be enhanced as a result of CIT training.

H5**:** CIT training will improve officers' perceptions of the mental health resources in the community and the mental health referral process.

H6: Officers will report a decrease in arrests or disciplinary actions and an increase in mental health referrals in the disposition of mental health calls for service following their completion of CIT training.

These hypotheses were tested by surveying law enforcement and correctional officers receiving the training in nine Florida counties at three points in time: first day of training, last day of training, one month following their completion of the training. The first five hypotheses were measured at each time point, while the final hypothesis was measured on the pretest and follow-up survey. This study assessed the immediate training effects by measuring changes between the pretest and posttest on the key measures of training effectiveness. The intermediate training effects were evaluated by measuring changes between the posttest and follow-up data collection points. To examine the final hypothesis related to the diversionary objective of CIT training, pretest survey responses were compared to the follow-up survey responses.

The first step involved in assessing the effectiveness of the training curriculum entailed statistical testing to measure the immediate training effects by comparing officers' pretest scores to their posttest scores on five measures that reflect the first five hypotheses just listed. These measures include: 1) Knowledge of Mental Illness, 2) Self-Efficacy, 3) Perceptions of Verbal De-escalation, 4) Perceptions of Mental Health Referral Process and Community Mental Health Services, and 5) Knowledge of Mental Health Referral Process and Community Mental Health Services. The results of the independent samples t-tests revealed CIT training significantly

improved officers' scores on each of these measures, indicating the training successfully achieved the immediate, intended officer-level objectives among this sample.

When the immediate training effects were examined among groups of officers based on their demographic characteristics and the other key independent variables previously outlined, bivariate analyses demonstrated an increase on every measure of training effectiveness across all groups. However, these analytical procedures revealed that some groups gained more than others on the measures of training effectiveness. To elaborate, correctional officers demonstrated a greater increase than law enforcement officers on the "Knowledge of Mental Health Referral Process" and the "Knowledge of Mental Health Services" measures. Furthermore, females experienced a greater improvement than males on the "Self-Efficacy" and "Knowledge of Mental Health Referral Process" measures. With regard to race, nonwhite officers gained more than white officers on the "Knowledge of Mental Health Referral Process" measure, as well as the "Knowledge of Mental Health Services" measure. Interestingly, volunteers gained more than non-volunteers on the "Knowledge of Mental Health Referral Process" measure, whereas non-volunteers demonstrated a greater increase on the "Knowledge of Mental Illness" measure when compared to volunteers. Finally, officers without prior mental health training increased more than officers with prior mental health training on the "Knowledge of Mental Illness" measure.

Following the identification of differences between groups in terms of the immediate training effects, a series of independent samples t-tests were conducted to compare the baseline (pretest) scores among the groups just described on the measures where a significant difference was identified. These analyses were conducted to determine whether the differences identified could be attributable to pre-training dissimilarities, rather than susceptibility to the training. The

results of these analyses indicated the groups that demonstrated greater increases on the measures of training effectiveness started with lower mean baseline scores, which suggests they had more to gain from the training. These findings point to the presence of a ceiling effect, in which there is only so much to be gained from a training program and the ceiling is considered the maximum effectiveness of training (Lewis-Beck, Bryman, Futing Liao, 2003). Thus, the groups of officers with lower pretest mean scores on the measures of training effectiveness had further to climb to reach the ceiling, which could explain the differential growth rates. The ceiling effect appears to be relevant to every group difference noted between the pretest and posttest aside from the disparate growth rates found between volunteers and non-volunteers on the "Knowledge of Mental Illness" measure. Volunteers and non-volunteers entered the training with roughly the same mean scores on this measure, which indicates the training truly did have a greater impact on non-volunteers with regard to improving their "Knowledge of Mental Illness."

The finding that non-white officers had a lower mean baseline score than white officers on the "Knowledge of Mental Health Referral Process" and the "Knowledge of Mental Health Services" measures could be attributable to differential rates of prior exposure to persons with a mental illness. When these two groups were compared on the question that pertained to prior exposure to mental illness, 35% of white officers and 24% of non-white officers reported knowing someone with a mental illness. While the Chi-square test did not prove significant, this difference is potentially substantial enough to provide an explanation for the differences identified between these two groups on the pretest and posttest measures of training effectiveness just outlined.

An additional Chi-square test was conducted to compare males and females in terms of their reported prior exposure to mental illness to determine if the differences identified between these two groups on the measures associated with the immediate training effects could be attributable to their differential exposure rates. The results of this Chi-square test revealed very little difference between these two groups on this question, although women were actually slightly more likely than men to report having known someone with a mental illness. This finding confounds the results previously provided regarding the relationships between race and the immediate training effects because males scored higher than females on the key measures of training effectiveness on the pretest survey. Future research would be needed to validate the hypothesis that the differences noted with regard to race and gender in terms of the baseline scores on the measures of training effectiveness are attributable to differential rates of prior exposure to persons with a mental illness.

The next step in the analytical process of the program evaluation component of the study involved the construction of mixed linear regression models to examine the relative importance of the independent variables on the prediction of the change identified between the pretest and posttest on the key measures of training effectiveness. Since relationships were only identified between the independent variables and change in "Knowledge of Mental Illness," "Self-Efficacy," "Knowledge of Mental Health Referral Process" and "Knowledge of Mental Health Services," multivariate models were not created for "Perceptions of Verbal De-escalation" and "Perceptions of Mental Health Services and Mental Health Referral Process." The results of the multilevel mixed regression model that controlled for county with "Change in Knowledge of Mental Illness" as the dependent variable revealed that prior mental health training and officer

sex were significant predictors of the pretest to posttest change on this measure of training effectiveness. When controlling for the other independent variables and county of training, officers with no prior mental health training and male officers gained more than their counterparts on this measure of training effectiveness. While a relationship between officer sex and "Change in Knowledge of Mental Illness" was not identified at the bivariate level, this relationship did appear when controlling for other possible explanatory variables. This finding suggests the relationship between officer sex and "Change in Knowledge of Mental Illness" may have been masked by the other variables at the bivariate level, but when controlling for those "masking" variables, the nature of the relationship became readily apparent.

In addition, officer sex was the only variable that remained a significant predictor of "Change in Self-Efficacy" when controlling for other variables in the multilevel mixed regression model examining this measure of training effectiveness. This finding indicates females gained slightly more than males in terms of their "Self-Efficacy" when responding to persons with a mental illness. In the remaining models, officer type was a significant predictor of "Change in Knowledge of Mental Health Referral Process" and "Change in Knowledge of Mental Health Services" suggesting correctional officers gained more than law enforcement officers from CIT training on these two measures. Finally, years of service became a significant predictor of "Change in Knowledge of Mental Health Services," interpreted as a diminished effect with increasing years of service on this measure.

The significant findings presented regarding officer sex and immediate training effects are complex in the sense that males seem to gain more in terms of enhancing their "Knowledge of Mental Illness," while females seem to gain more on the measures pertaining to "Self-

Efficacy" and "Knowledge of Mental Health Referral Process and Mental Health Services." As mentioned previously, future research could explore whether these differences could be attributable to varying levels of exposure to persons with a mental illness and the broader mental health system prior to CIT training. In addition, the cognitive learning styles of men and women differ greatly and may explain disparate gains in various areas of the training (Severiens & Ten Dam, 1994).

The differences identified between correctional officers and law enforcement officers are likely products of dissimilarities in their working environments as well as their disproportionate rates of exposure to the mental health system. Law enforcement officers have a greater knowledge of the mental health referral process and available community resources because they interact with the mental health system more often than correctional officers. Their similar scores on "Knowledge of Mental Illness" can be explained by the high rates of arrest and incarceration found among persons with a mental illness, meaning both groups of officers have been readily exposed to signs and symptoms of mental illness in their professional duties.

While the officers' "years of service" variable was only a significant predictor of "Change in Knowledge of Mental Health Services," the regression coefficient for each model aside from "Change in Knowledge of Mental Illness" was negative. This finding suggests CIT training may have an overall diminishing return the longer the officer is in the field. Receptivity to training may decrease over time and the willingness to adopt new skills could be influenced by proximity to retirement and increasing age. This finding supports assertions made in previous studies that effectiveness of on-the-job training decreases as the age (or years of service) of the trainee increases (Kubeck, Delp, Haslett & McDaniel, 1996).

To assess the intermediate effectiveness of CIT training, the officers that completed the pretest and posttest questionnaires were surveyed one month following their completion of the training. However, because the current study suffered a high attrition rate between the posttest to follow-up data collection points, a comparison of the follow-up survey respondents to non-respondents on the independent and dependent variables of interest was essential to understanding the generalizability of the findings related to the intermediate training effects. In terms of the independent variables, bivariate analyses revealed that female follow-up response rates were higher than males, volunteers responded at a greater rate than non-volunteers, and officers with prior mental health training were more likely to respond than officers with no prior mental health training.

When examining the differences between respondents and non-respondents on the dependent measures of training effectiveness, the only significant finding identified involved the pretest "Perceptions of Verbal De-escalation" measure. This finding indicated that respondents to the follow-up survey possessed less favorable attitudes about verbal de-escalation than non-respondents before attending CIT training. However, there was virtually no difference between these two groups on this measure at the posttest data collection point, which suggests this finding does not compromise the generalizability of findings related to this measure.

To assess the mean changes that occurred between the posttest and follow-up survey on three measures of training effectiveness, a series of paired samples t-tests were conducted. The results of these statistical tests revealed that officers experienced very little change on the "Knowledge of Mental Illness" measure between the posttest and follow-up data collection points. This finding indicates that the knowledge acquired during CIT training was largely

retained during the follow-up period. However, significant reductions were identified when examining the follow-up mean scores for the "Self-Efficacy" and "Perceptions of Verbal-De-escalation" measures. These results suggest officers experienced a significant decline, or decay on these measures when they returned to the field following their completion of CIT training. These declines took their mean scores to a lower level than documented on the pretest survey.

Next, dependent change variables were created to reflect the change that occurred between the posttest and the follow-up data collection points on the "Knowledge of Mental Illness," "Self-Efficacy," and "Perceptions of Verbal De-escalation" measures. A series of bivariate analyses were employed to assess the relationships between the independent variables and the dependent changes variables for these three measures associated with the intermediate effectiveness of CIT training. The only significant relationships identified involved the "Perceptions of Verbal De-escalation" measure. On this measure, unranked officers experienced a greater decline than ranked officers and non-white officers demonstrated a greater decrease than white officers. To further test the significance of these relationships when controlling for county of training, a multilevel mixed regression model was constructed. In this model, officer race remained a significant predictor of change on the "Perceptions of Verbal De-escalation measure," while the effect of officer rank diminished to a non-significant level.

One possible explanation for the relationship between officer race and change in "Perceptions of Verbal De-escalation" could be attributable to differences that existed between white and non-white officers on this measure prior to the follow-up data collection point. Although white and non-white officers began the training with nearly the same mean score, non-white officers had a higher mean score on the posttest indicating they gained more from the

training on this measure. Therefore, they had more to lose going into the follow-up data collection point. As mentioned previously, the differences identified between white and non-white officers in terms of their prior exposure to mental illness could be a possible explanation for the baseline differences demonstrated between white and non-white officers in terms of their perceptions of verbal de-escalation.

The associations discussed earlier among the independent variables were identified and tested as potential interaction effects among the dependent intermediate change variables using a series of ANOVA models. These models revealed no significant interaction effects among the independent variables and the dependent intermediate change variables. Furthermore, the differences identified between respondents and non-respondents on the independent variables (officer sex, volunteer status, prior mental health training) were not important with regard to the intermediate change variables, thus the diminished generalizability associated with these differences is irrelevant.

Growth curve models, multiple comparisons, and box plots were utilized to illustrate the overall mean changes between the three data collection time points on the "Knowledge of Mental Illness," "Self-Efficacy," and "Perceptions of Verbal De-escalation" measures. Officers experienced a statistically significant increase between the pretest and posttest on the "Knowledge of Mental Illness" measure. The mean score on the follow-up survey for this measure reflected very little change between the posttest and follow-up data collection points. This finding indicates officers retained the knowledge gained from CIT training during the follow-up period.

The box plots, growth curve models, and multiple comparisons also demonstrated a statistically significant increase between the pretest and posttest mean scores on the "Self-Efficacy and "Perceptions of Verbal De-escalation" measures. Unfortunately, officers experienced a significant decline on both of these measures on the follow-up survey indicating the effectiveness of the training with regard to these two measures decayed by the follow-up data collection point.

As mentioned previously, "Self-Efficacy" refers to one's perceptions of one's ability. Within the context of the current study, officers were asked several questions at each time point pertaining to their level of confidence when intervening and managing situations involving persons with a mental illness. While officers experienced a significant increase on this measure between the pretest and posttest surveys, the significant decline identified on the follow-up survey suggests their self-confidence decreased over time. One potential explanation for this deterioration that could be empirically tested in the future might be the acquisition of knowledge and skills in the training leads to an increased awareness of shortcomings in these areas once officers return to the field. Law enforcement and correctional officers may leave CIT training with improved self-efficacy surrounding their ability to manage situations involving persons with a mental illness, but when given the opportunity to employ the knowledge and skills they obtained in the training after returning to duty, they could become acutely aware of inadequacies they did not know existed prior to the training.

Similarly, the findings related to the decline on the "Verbal De-escalation" measure suggest CIT training may have a boomerang effect in the intermediate timeframe by lowering officers' perceptions of the de-escalation tools they learned once given the opportunity to

exercise these skills in the field. Although CIT training is intended to improve officers' perceptions and understanding of verbal de-escalation by providing them with additional de-escalation skills and exercises, officers may not find these tools as useful as hoped when encountering persons with a mental illness once back in the field.

To evaluate the intermediate training effects associated with the other two hypotheses captured at each time point, "Perceptions of Mental Health Services and Mental Health Referral Process" and "Knowledge of Mental Health Services and Mental Health Referral Process," several questions were included on the follow-up survey that were different from the pretest and posttest surveys. These questions asked officers to indicate whether they felt the training had worsened, improved or had no impact on these measures. The majority of officers indicated CIT training improved their knowledge and perceptions of community mental health resources and the mental health referral process. On the questions pertaining to both the "Perceptions of Mental Health Services and Mental Health Referral Process" and "Knowledge of Mental Health Services and Mental Health Referral Process," a greater percentage of law enforcement officers indicated an improvement than correctional officers. This finding is counterintuitive considering correctional officers demonstrated a greater improvement in these areas between the pretest and posttest data collection points.

The final hypothesis tested in the program evaluation component of the study pertained to the diversionary objective of the CIT model. This aspect of the study sought to measure behavioral change among correctional and law enforcement officers in their responses to incidents involving persons with a mental illness that could be attributable to the knowledge and skills obtained in CIT training. To measure this change, officers were asked to indicate the

frequency with which they encountered persons with a mental illness in a number of different scenarios in the month prior to the training and the month following the completion of training. Their responses were aggregated to create a summed "Total Encounters" variable. In addition, they were asked to provide the number of times and in what manner they intervened in situations involving a person with a mental illness in the previous month. They were asked to provide separate figures for the interventions in which they took no action, initiated a mental health referral, or initiated an arrest (LEO)/disciplinary action (CO). These figures were summed to create a "Total Interventions" variable.

For both the pretest and follow-up surveys, law enforcement officers most often reported encountering a person with a mental illness as subjects of calls for assistance. The second most frequently reported scenario on the pretest and follow-up surveys was when a person with a mental illness posed a danger to themselves or others. On the pretest, law enforcement officers reported the third most common scenario as a person with a mental illness as a suspected offender. However, on the follow-up survey, the third most commonly cited scenario was a person with a mental illness as a victim of a crime.

In terms of interventions, the findings were similar for the pretest and follow-up surveys. Law enforcement officers reportedly intervened in roughly half of the situations involving a person with a mental illness they encountered. The most commonly reported interventions for the pretest were those that resulted in a mental health referral, followed closely by no formal action. This finding was reversed on the follow-up survey. At both time points, law enforcement officers were nearly twice as likely to initiate a mental health referral as they were to initiate an arrest.

What can be derived from these findings is that persons with a mental illness most commonly encountered law enforcement officers included in this sample when they were subjects of calls for assistance, meaning someone called the police out of concern for the individual. Additionally, most law enforcement encounters with persons with a mental illness resulted in either the initiation of a mental health referral or no formal action. Of the three types of interventions, law enforcement officers were least likely to arrest a person with a mental illness at both time points. The overall number of encounters and interventions did not differ greatly between the two time points, suggesting CIT training did not have the intended behavioral impact as measured by this hypothesis associated with the intermediate effectiveness of the training. Additionally, it does not appear that CIT-trained law enforcement officers were more readily dispatched to situations involving persons with a mental illness following their completion of the training.

The three most frequently reported scenarios on both the pretest and follow-up surveys in which correctional officers encountered inmates with a mental illness were when these inmates were subjects of rule violations, perpetrators of attacks on other inmates, and when they posed a danger to themselves. The most commonly reported manner of intervention by correctional officers on the pretest survey was the initiation of a mental health referral, which nearly doubled the reported rate of interventions that resulted in formal disciplinary action. The pretest rate at which correctional officers intervened and took no formal action was very similar to the reported rate of interventions that resulted in the initiation of a mental health referral. On the follow-up surveys, correctional officers reported their most frequent form of intervention as those that resulted in no formal action, followed closely by those that resulted in the initiation of a mental

health referral. The least reported type of intervention by correctional officers on both time points was the initiation of disciplinary action.

According to the findings derived from the responses of correctional officers to the aforementioned questions, the total number of encounters and interventions decreased among the officers that responded to the follow-up survey. This finding is counterintuitive in that it was hypothesized that officers completing CIT training would be utilized more frequently to resolve incidents involving persons or inmates with a mental illness. However, it is promising that correctional officers reported at both time points the initiation of disciplinary action as the least common outcome of interventions involving inmates with a mental illness.

Diffusion and Institutionalization Component

The diffusion and institutionalization component of the current study utilized an exploratory content analysis analytical strategy to assess the degree to which the theoretical framework previously outlined applies in this context. By examining the process by which criminal justice organizations adopt and internalize innovative practices, this study contributes to the literature surrounding organizational behavior. The findings derived from this component of the study speak to the nature of organizational change. Prior literature has explored the diffusion and institutionalization process that occurs in organizational fields, but has rarely explored these two concepts in conjunction with one another across both the law enforcement and correctional domains of the criminal justice field. Additionally, by coupling the concept of a social movement with organizational theory, the current study takes a unique approach to testing these classic theoretical paradigms.

The theoretical framework proposed by Davis et al. (2005) suggested that change occurring within an organizational field can be likened to a social movement. The current study tested this assertion by conceptualizing the diffusion of the CIT model in the organizational field of criminal justice as a social movement. According to Davis et al. (2005), organizational field change that resembles a social movement is typically facilitated by certain factors. The present study incorporated three of these factors to measure the extent to which this theoretical framework can be applied to the diffusion of an innovation. The first facilitating factor examined in the current study is the presence of a destabilizing event that prompts "reactive mobilization" from organizations. To identify the role of destabilizing events in the diffusion of the CIT model, agency representatives were asked whether a tragic event prompted their organizations to adopt the CIT model. Therefore, the tragic event reflects the concept of a destabilizing event and the "reactive mobilization" refers to the adoption of this innovative practice.

The results pertaining to the existence of a tragic event as a factor that influenced the decision of criminal justice agencies to adopt the CIT model indicate this factor played a minimal role in the diffusion of the CIT model among the agencies represented in this study. Those agency representatives that did indicate a tragic event played a role in their organization's decision to adopt the CIT model suggested the event occurred in their agency or in a neighboring agency. In addition, a couple of respondents indicated their organization decided to adopt the CIT model in response to high-profile tragic incidents, such as the Virginia Tech shooting and the original incident in Memphis that facilitated the inception of the model. Although most agency representatives indicated a tragic event did not prompt their organizations to adopt the

CIT model, the hypothesis was not entirely refuted because destabilizing events did facilitate the diffusion of the model among certain agencies.

An additional factor noted by Davis et al. (2005) as a facilitator of organizational field change is communication among "institutional actors." The institutional actors in the current study are "dominants" or organizational leaders from various criminal justice agencies. Communication among organizational leaders is a critical mechanism of mimetic isomorphism in institutional theory. The role of institutional actors in the diffusion of an innovation aligns with the concept of prestige noted by Weber (1947). Organizations within a specific field tend to turn to more prestigious or legitimate members of that field for innovative strategies and solutions. To capture this factor in the current study, agency representatives were asked whether interagency communication influenced their agency's decision to adopt the CIT model.

As indicated by the results related to this aspect of the study, 64% of the representatives indicated communication with other criminal justice agencies played a role in their organization's decision to adopt the model. The respondents suggested this communication occurred between members of their organizations and neighboring agencies, Memphis representatives, or State and National law enforcement agencies. These findings indicate interagency communication was essential to the diffusion of the CIT model among the majority of criminal justice organizations represented in this study. The current study also supports the notion that mimetic isomorphism occurs when members of organizations within a particular field communicate ideas with one another. Mimetic isomorphism results in uniformity among organizations operating within a particular field, illustrated by the widespread diffusion of an innovation.

The final factor associated with the social movement framework laid forth by Davis et al (2005) tested in the current study pertains to the pressure exerted on the organizational field from "external forces" as a facilitator of change. The external institutional environment is also a critical component of institutional theory as a mechanism of coercive isomorphism. To test this aspect of the theoretical framework, agency representatives were asked whether communication with mental health providers or mental health advocates influenced their agency's decision to adopt the CIT model. As indicated by their responses, mental health providers and mental health advocates both played a role in the decision to adopt the CIT model among the agencies represented. Thus, the diffusion of the CIT model across the agencies included in this study is partially attributable to the pressure exerted on these organizations by external forces. Similar to the implications stemming from the findings related to the interagency communication factor, external pressure leads to institutional conformity, meaning organizations begin to resemble one another when they are facing similar external pressures. Mental health providers and advocates lobbied heavily for the original creation of the Memphis model. The findings of this study suggest these external forces also play a key role in the diffusion of this model.

The diffusion component of the current study tested the theoretical framework laid forth by Davis et al. (2005) that utilized organizational theory to explain organizational field change as a social movement. The current study incorporated several tenets of this paradigm as facilitators of innovation diffusion within the organizational field of criminal justice. The findings related to this aspect of the study revealed the diffusion of CIT is rarely an embodiment of "reactive mobilization" or a response to a tragic event. However, this study did support the assertion that communication among "institutional actors" is a vital component of diffusion. As mentioned

previously, diffusion of an innovation within a particular organizational field represents the mimetic isomorphism that stems from interagency communication. In addition, external forces (mental health providers and advocates) played a key role in the diffusion of the CIT model across the agencies represented in this study. The external pressure exerted on organizations is a mechanism of coercive isomorphism, through which an innovation diffuses across an organizational field. It also appears these factors work together to facilitate the diffusion of the CIT model.

With regard to the institutionalization component of the study, changes made to the structure of organizations to internalize the CIT model were conceptualized as indicators of institutionalization. Katz and Kahn (1978) asserted that once a practice or policy becomes institutionalized in an organization, numerous changes are made to the organizational structure to accommodate the practice or policy. The first structural change cited by Katz and Kahn (1978) measured in this study involves the incorporation of new program routines, such as planning, monitoring and evaluation. To measure this change in the current study, agency representatives were asked how their organizations evaluate the CIT training program and the overall impact of the model within their jurisdiction. Approximately 71% of the representatives indicated their organization engages in some form of ongoing training evaluation and 63% indicated their agency evaluates the overall impact of the program. The mechanisms utilized to evaluate the training program include in-class evaluations, feedback from attendees, collaborative countywide meetings, and in-class monitoring and recordkeeping. In terms of evaluating the overall impact of the program, the representatives suggested they relied upon informal anecdotal evidence as well as CIT tracking forms. According to these findings, the model has been institutionalized to a

certain degree because the majority of the organizations included in the sample appear to be incorporating new program routines to accommodate the model.

An additional modification to organizational structure utilized as a measure of institutionalization in this study involves investment in program maintenance, or sustainability. The example of investment in program maintenance mentioned by Katz and Kahn (1978) and included in this study is the assignment of staff to manage the program. The majority (75%) of the respondents indicated their agency had a part-time employee or an employee with other responsibilities assigned to manage the program. Worth noting, some of these organizations have placed the CIT training program in their training division meaning those individuals responsible for training are now managing the CIT program. Proponents of this model argue that CIT is more than just a training program, so they argue against the placement of this program in the training division. Nonetheless, the findings related to this structural change made to organizations following the adoption of the CIT model also indicate the program is an institutionalized practice in most of the agencies represented in this study.

This study also included a measure of institutionalization associated with the allocation of resources to support the program. By asking representatives whether their organization has a dedicated line item in their annual budget to financially support the CIT program, the current study tapped into this organizational structural change cited by Katz and Kahn (1978). Very few of the respondents (8%) indicated their agency has a dedicated line item in their budget to support the program. This finding suggests organizations are not internalizing the model to the degree that financial resources are being allocated to support and sustain the program.

An additional indicator of institutionalization included in this study represents what Katz and Kahn (1978) referred to as a modification to an organization's official supports. Official supports refer to an organization's policies and procedures. To measure whether the organizations included in this study have modified their official supports to accommodate the CIT model, agency representatives were asked whether their organization has a written CIT policy. As illustrated by the responses to this question, nearly 70% of the organizations represented in this study have a written CIT policy to guide decision-making. This finding also supports the assertion that the CIT model is an institutionalized practice within these criminal justice agencies.

The final organization structural change measured in this study as an indicator of institutionalization represents a key tenet of institutional theory, legitimacy. To use the terminology utilized by Katz and Kahn (1978), a key component of institutionalization is the presence of "normative supports" in favor of the program, as measured by staff acceptance and administrative commitment. The current study asked agency representatives whether most supervisors in their organizations perceive CIT favorably. This question captures the extent to which the program has obtained internal legitimacy and normative support. As indicated by the responses to this question, nearly 80% of the representatives indicated this model is perceived favorably my most supervisors in their organizations. Therefore, the findings associated with this measure of organizational change support the idea that the CIT program has become, to a certain extent, internalized and institutionalized in most of the organizations represented in this study.

To summarize the findings related to the institutionalization aspect of the study, the adoption of the CIT model appears to usher in structural changes to organizations that indicate

institutionalization of the model. The majority of respondents indicated their organizations have made modifications to their structure to accommodate the model. The only indicator of institutionalization that was not supported by the findings from this study is related to the allocation of financial resources to support the program. One possible explanation for this finding is that the criminal justice agencies represented in this study may be unwilling or unable to allocate financial support to this program because budgetary cutbacks occurring across the State in recent years has greatly affected public sector organizations. With that being said, this finding does not necessarily mean these agencies would not allocate resources if they had the resources to allocate.

The results from the institutionalization element of the study support the theoretical framework previously outlined. The findings implicate this model has become internalized and institutionalized within criminal justice agencies to the point that these organizations are modifying their organizational structure to incorporate and sustain the program. However, there appears to be a continuum of institutionalization that occurs within these organizations following the adoption of the CIT model. Future research could utilize the measures of institutionalization tested here to construct a spectrum. For instance, if an organization made all of the changes to their organizational structure to internalize the CIT model, they have reached full institutionalization of the model, whereas the model in other organizations may only be slightly, partially, or mostly institutionalized. The concept of an institutionalization continuum is not an entirely new concept and the findings related to this component of the study suggest this could certainly be explored in the future.

The diffusion and institutionalization aspect of this study is particularly important and unique because it explores these topics within an organizational field that consists primarily of agencies whose leaders are elected or appointed. Organizations in which leadership is fluid and highly political are heavily influenced by perceptions of legitimacy and prestige, as well as external constituencies. Therefore, public sector organizations are more likely to adopt innovative programs they believe heighten their organization's legitimacy. This notion of legitimacy and the public sector are supported by the findings in the present study that interagency communication and external forces were key facilitators of the diffusion and institutionalization of the CIT model.

Study Limitations

There are several limitations of the program evaluation component of this study. First, this aspect of the study utilized a convenience sample, which reduces the generalizability of the findings. Second, the true impact of CIT training on law enforcement and correctional officers is difficult to estimate because the study did not include a control group. Third, because many officers volunteered for the training, selection bias may pose a threat to external validity. In addition, the short follow-up period does not allow the measurement of any long-term attitudinal or behavioral changes experienced by CIT-trained law enforcement and correctional officers. Furthermore, the less than desirable response rate for the follow-up survey diminished the quality of the implications that could be derived from the study. Finally, the officer surveys did not include a measure of social desirability making it difficult to determine if the officers answered the questions in a false manner that projected a greater improvement across the time points than actually occurred.

The diffusion and institutionalization component of this study had several notable shortcomings. First, this aspect of the study is primary exploratory and has limited quantitative contributions. Secondly, the small sample size limited the generalizability of the findings and hindered the incorporation of organizational characteristics as predictors of varying levels of institutionalization. Furthermore, because the sample was loosely constructed using points of contact provided by the countywide CIT coordinators, as opposed to agency administrators, the individuals that actually completed the surveys might not have been the best person to answer the questions pertaining to modifications of organizational structure. This leads directly to the next limitation, which is ever-present in survey research, social desirability. In the context of the current study, many persons involved in the CIT program feel very strongly about its effectiveness and are largely advocates for the program. Therefore, the individuals that completed the surveys may have provided biased answers as advocates of the program. In addition, there is always the possibility that respondents may have answered the questions in the manner in which they perceived as desirable to their organization or the outcomes of the study.

Future Directions

This study brought to light several ideas for future studies involving the Crisis Intervention Team (CIT) model. First, duplicating this study with a larger sample size covering a broader geographical area would enhance the generalizability of these findings. Secondly, extending the follow-up period to a minimum of six months following the completion of the training would provide a more accurate picture of the long-term effectiveness of CIT training. In addition, future studies should incorporate official CIT reports completed by CIT-trained officers when they respond to an incident involving a person with a mental illness to gain a better

understanding of the behavioral impact of the training. Furthermore, more research is needed surrounding the implementation and effectiveness of the CIT model in rural areas. Finally, the ideal assessment of training program effectiveness would entail the development of a randomized control research design in which officers were randomly assigned to a treatment (training) group and control group. This type of research design would permit the comparison of CIT-trained officers to non-CIT rained officers in terms of their performance on the measures of training effectiveness.

Future research surrounding the diffusion and institutionalization of an innovation could replicate this study using the CIT program and the theoretical framework provided. By increasing the sample size, future studies could enhance the generalizability of these finding. In addition, the theoretical framework employed in this study could be tested using virtually any program in any organizational field. Future research could also incorporate organizational characteristics to assess whether particular organizations are more or less likely to modify their organizational structure when adopting an innovation.

Conclusion

The current study involved an extensive examination of the Memphis Crisis Intervention Team (CIT) model. The first component of the study utilized a panel research design to evaluate the effectiveness of the CIT training curriculum. The findings from the training evaluation aspect of the study indicate CIT training effectively achieved the immediate officer-level objectives. However, data from the follow-up data collection point suggested a noticeable deterioration or decay in terms of intermediate training effectiveness. In addition, while the training objectives pertaining to improvement in knowledge and perceptions were achieved, the training did not

appear to have the intended behavioral consequences in the intermediate timeframe. The results of this study indicate the training did not have a noticeable impact on the nature and extent to which law enforcement and correctional officers encounter and intervene in situations involving persons with a mental illness, meaning the diversionary objective of the training was not achieved.

The second component of the study utilized survey responses from criminal justice agencies to explore the process by which the CIT model has diffused throughout these organizations. This aspect of the study also measured changes made to the structure of criminal justice organizations to examine the extent to which this model has become an institutionalized practice in this field. The findings pertaining to diffusion indicate interagency communication and pressure from external organizations contributed to the adoption of the CIT model among the agencies represented in this study. The institutionalization findings support the notion that the criminal justice organizations included in this study have modified their organizational structure to internalize the CIT model. Furthermore, these findings suggest the CIT program has become an institutionalized practice in these organizations. Overall, the findings align with the hypotheses laid forth and the previously outlined theoretical framework.

The CIT model has permeated the field of criminal justice and has become a widely adopted practice across the United States and around the world. The current study not only examined the effectiveness of the training element of the model, but also provided evidentiary support for a theoretical framework that explains the process by which this model diffuses and the modifications made to organizational structure to internalize the model. The two major aspects of this study coincide to paint a comprehensive picture of the CIT model in Florida.

In an era where evidence-based practices lie at the forefront of the public sector, it is both important to enhance the evidence base surrounding widespread practices as well as to understand how non-evidence-based practices diffuse throughout an organizational field. Additionally, exploring the extent to which widespread practices modify organizational structure when they become institutionalized highlights the permeating nature of program adoption. By coupling a training program evaluation with an assessment of diffusion and institutionalization, this study makes a unique contribution to organizational and evidence-based literature.

The perceived legitimacy that accompanies the diffusion and institutionalization of a widespread program links the two pieces of this study together. The legitimacy of a program is tied directly to the perceived effectiveness of a program. Understanding whether the perceived effectiveness of a program is supported by the actual effectiveness of the program is the key to determining whether evidence of effectiveness is required for program legitimacy to be attained. Disentangling the actual effectiveness of a program and its perceived legitimacy addresses the concept of an "institutional myth" as suggested by Crank and Langworthy (1973). According to Crank and Langworthy (1973), institutionalized organizations, such as law enforcement agencies, often adopt policies and procedures that enhance their legitimacy regardless of whether the adopted policy or procedure has the intended impact (i.e. DARE, Scared Straight, etc.). In addition, some dominant institutional actors become "true believers" of programs, regardless of the absence of evidentiary support (Hoffer, 1951). This assertion aligns with the notion that the diffusion of a practice can resemble a social movement when perceived legitimacy outweighs evidence of effectiveness.

The Memphis CIT model is an example of a widespread response to highly-publicized incidents that threatened the legitimacy of law enforcement agencies throughout the country. By assessing the effectiveness of the program, the current study sought to determine whether this program is simply a perpetuated "institutional myth" intended to enhance departmental legitimacy or whether it is an effective program that improves the responses of law enforcement and correctional officers to mental health crises. In addition, the study examined how a program weakly supported by evidence has been widely implemented in a field married to the concept of evidence-based practices. Finally, by incorporating the exploratory diffusion and institutionalization aspect, the current study offers a greater understanding of perceived program legitimacy and the extent to which the adoption of the program results in modifications to the organizational structure of criminal justice agencies.

APPENDIX A: SURVEY INSTRUMENTS

Unique ID: _____

Law Enforcement Officers Pre-Test Survey

I. Demographic Information

Age: _____

Race: (Please check all that apply)

- ☐ White
- ☐ Black/African American
- ☐ American Indian/Alaskan Native
- ☐ Asian
- ☐ Native Hawaiian/Other Pacific Islander
- ☐ Other_____(Please specify)

Are you of Hispanic, Latino, or Spanish origin? (Please check the appropriate response)

- ☐ Yes
- ☐ No

Sex: (Please check the appropriate response)

- ☐ Male
- ☐ Female

Rank: _____

Years of service: _____

II. Prior Exposure to Mental Illness and Mental Health Training

1. **Please list other training sessions you have attended this year:**
   _____
   _____
   _____

2. **Did you receive mental health training in the academy? (Please check the appropriate response)**

   ☐ Yes

   ☐ No

   2a. If you answered "yes" to question 2, how many hours of mental health training did you receive in the academy? _____

3. **How did you first hear about the Crisis Intervention Team Model? (Please check the appropriate response)**

- ☐ Training academy
- ☐ Supervising officer
- ☐ Fellow law enforcement officer
- ☐ Correctional/detention officer
- ☐ Mental health advocate or consumer
- ☐ Other_____(Please specify)

4. **Did you volunteer for CIT training? (Please check the appropriate response(s))**

- ☐ Yes
- ☐ No

4a. If you answered "yes" to question 3, what prompted you to volunteer for CIT?

- ☐ An incident involving a person with a mental illness
- ☐ Personal testimony from other officers
- ☐ Encouragement from supervisor
- ☐ Pay increase or promotion
- ☐ Other_____(Please specify)

4b. If you answered "no" to question 3, why are you attending this training?

- ☐ "Voluntold"- Strongly recommended by supervisor
- ☐ CIT is mandatory for all officers in my department
- ☐ Other_____(Please specify)

5. **Does anyone in your personal life have a diagnosed mental illness?** (Please check all that apply)

- ☐ No one
- ☐ Friend
- ☐ Family member
- ☐ Co-worker
- ☐ Don't Know

III. Knowledge and Perceptions of Mental Illness

6. **Please indicate which of the following behaviors you typically associate with mental illness:**

Statement	Yes	No	Don't Know
Dramatic mood swings			
Auditory and/or visual hallucinations			
Slurred speech			
Inappropriate emotional responses			
Excessive paranoia			
Incoherent rambling			
Manipulative personality			
Violence and aggression			
Disorderly conduct			
Obsessive compulsions			
Delusional thoughts			
Uncontrollable crying			

For the following questions, please check the most appropriate response:

Statement	True	False	Don't Know
7. When someone has a mental illness, their brain is impaired in a way that affects their behavior and emotions.			
8. An individual with a developmental disorder is likely to respond to a command differently than an individual with a mood disorder.			
9. Schizophrenia is a mental illness that is often accompanied by hallucinations.			
10. An individual with bipolar disorder is sometimes unpredictable because their mood fluctuates between depression and mania.			
11. One of the main causes of mental illness is a lack of self-discipline and will-power.			
12. A person with a mental illness is more dangerous than a person without a mental illness.			

Statement	True	False	Don't Know
13. The best way to deal with a person displaying signs of a mental illness is to set firm limits and make it clear that the officers are in charge.			
14. When an individual is paranoid and believes that everyone is out to get them, it is best to play along with them to get them to do what you want.			
15. If a person is threatening to harm themselves or others, it is best to approach them with an aggressive response.			

IV. Encounters with Persons with a Mental Illness

16. Within the last month, how many times have you encountered a person displaying signs of a mental illness in the following situations?

_____As a victim of a crime

_____As a witness to a crime

_____As a suspected offender

_____As a subject of a call for assistance

_____As a subject that is posing a danger to themselves or others

17. Within the last month, how many times have you formally intervened with a person displaying signs of a mental illness while on duty? _____

17a. How many of these interventions have involved the removal of a person displaying signs of a mental illness from a situation without an arrest or mental health referral?_____

17b. How many of these interventions have resulted in a mental health referral? _____

17c. How many of these interventions have resulted in an arrest? _____

18. In your experience, what is the most common reason for intervening with a person displaying signs of a mental illness while on duty? (Please check the most appropriate response)

- ☐ The individual is a victim of a crime
- ☐ The individual is a witness to a crime
- ☐ The individual is a suspected offender
- ☐ The individual is posing a danger to themselves or others
- ☐ Other _____(Please specify)

19. In your experience, how often do you encounter the same individuals displaying signs of a mental illness in the community?

- ☐ Never
- ☐ Sometimes
- ☐ Often
- ☐ Always

20. In your experience, how often do you use verbal de-escalation skills when responding to incidents involving a person displaying signs of a mental illness?

- ☐ Never
- ☐ Sometimes
- ☐ Often
- ☐ Always

Please indicate your level of agreement with the following statements:

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
21. It is my professional duty as a law enforcement officer to intervene when I encounter an individual displaying signs of a mental illness that I perceive poses a threat to themselves or others.					
22. It is my professional duty as a law enforcement officer to intervene when I encounter an individual					

displaying signs of a mental illness that seems unable to care for themselves.					
23. The criminal justice system should be utilized to rehabilitate persons with a mental illness.					
24. In general, it can be advantageous to use verbal de-escalation skills versus physical intervention when responding to persons displaying signs of a mental illness.					
25. I am comfortable using verbal de-escalation as opposed to physical force when responding to persons displaying signs of a mental illness until I feel my safety is threatened.					
26. The type of intervention skills (i.e. verbal de-escalation or physical force) used can impact the intensity and duration of incidents involving a person displaying signs of a mental illness.					

V. Self-Efficacy in Incidents Involving Persons Displaying Signs of a Mental Illness

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
27. I am confident in my ability to recognize signs and symptoms of mental illness among individuals that I encounter in the community.					
28. I know how to effectively communicate with persons displaying signs of a mental illness.					
29. I am comfortable interacting with persons displaying signs of a mental illness.					
30. I am confident in my ability to defuse aggression before it becomes violence (verbal de-escalation).					
31. I feel well-prepared to respond to an incident involving a person engaging in self-harming behavior or threatening suicide.					

32. I possess the skills needed to effectively manage any type of mental health crisis.					

VI. Perceptions of Mental Health Services in the Community

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
33. I am well aware of the guidelines surrounding civil commitment in Florida (Baker Act).					
34. I am knowledgeable about the mental health services that are available in my community.					
35. The mental health services available in my community effectively meet the needs of persons with a mental illness.					
36. The mental health services in my community need to be improved.					
37. I am satisfied with the mental health referral process in my community.					
38. The mental health referral process is more difficult than jail admission in my community.					
39. Persons with a mental illness receive effective mental health treatment in jail.					
40. I am satisfied with the options that are available to me when resolving a mental health crisis in the community.					

VII. Crisis Intervention Team Implementation

41. Are you aware of a formal policy within your department providing guidelines for the Crisis Intervention Team model?

- ☐ Yes
- ☐ No
- ☐ Don't Know

→ **41a.** If you answered "yes" to question 41, do you clearly understand this policy?

- ☐ Yes
- ☐ No

Please indicate your level of agreement with the following statements:

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
42. The crisis intervention team in my department serves as a specialty unit that is deployed to manage mental health crises that occur in the community.					
43. The crisis intervention team is discussed regularly in my department.					
44. Law enforcement officers are exposed to the crisis intervention team model early on in their work in my department.					
45. Every officer in my department is expected to understand the role of the crisis intervention team.					
46. CIT is perceived favorably by most supervisors in my department.					
47. All officers in my department should receive CIT training.					

Unique ID: _____

Correctional Officers Pre-Test Survey

I. Demographic Information

Age: _____

Race: (Please check all that apply)

- ☐ White
- ☐ Asian
- ☐ Black/African American
- ☐ Native Hawaiian/Other Pacific Islander
- ☐ American Indian/Alaskan Native
- ☐ Other_____(Please specify)

Are you of Hispanic, Latino, or Spanish origin? (Please check the appropriate response)

- ☐ Yes
- ☐ No

Sex: (Please check the appropriate response)

- ☐ Male
- ☐ Female

Rank: _____

Years of service: _____

II. Prior Exposure to Mental Illness and Mental Health Training

1. **Please list other training sessions you have attended this year:**
   _____
   _____
2. **Did you receive mental health training in the academy? (Please check the appropriate response)**

- ☐ Yes
- ☐ No

2a. If you answered "yes" to question 2, how many hours of mental health training did you receive in the academy? _____

3. **How did you first hear about the Crisis Intervention Team Model? (Please check the appropriate response)**

- ☐ Training academy
- ☐ Supervising officer
- ☐ Fellow correctional officer
- ☐ Law Enforcement officer
- ☐ Mental health advocate or consumer
- ☐ Other_____(Please specify)

4. **Did you volunteer for CIT training? (Please check the appropriate response(s))**

- ☐ Yes
- ☐ No

4a. If you answered "yes" to question 3, what prompted you to volunteer for CIT?

- ☐ An incident involving a person with a mental illness
- ☐ Personal testimony from other officers
- ☐ Encouragement from supervisor
- ☐ Pay increase or promotion
- ☐ Other_____(Please specify)

4b. If you answered "no" to question 3, why are you attending this training?

- ☐ "Voluntold"- Strongly recommended by supervisor
- ☐ CIT is mandatory for all officers in my department
- ☐ Other_____(Please specify)

5. **Does anyone in your personal life have a diagnosed mental illness?** (Please check all that apply)

- ☐ No one
- ☐ Friend
- ☐ Family member
- ☐ Co-worker
- ☐ Don't Know

III. Knowledge and Perceptions of Mental Illness

6. Please indicate which of the following behaviors you typically associate with mental illness:

Statement	Yes	No	Don't Know
Dramatic mood swings			
Auditory and/or visual hallucinations			
Slurred speech			
Inappropriate emotional responses			
Excessive paranoia			
Incoherent rambling			
Manipulative personality			
Violence and aggression			
Disorderly conduct			
Obsessive compulsions			
Delusional thoughts			
Uncontrollable crying			

For the following questions, please check the most appropriate response:

Statement	True	False	Don't Know
7. When someone has a mental illness, their brain is impaired in a way that affects their behavior and emotions.			
8. An individual with a developmental disorder is likely to respond to a command differently than an individual with a mood disorder.			
9. Schizophrenia is a mental illness that is often accompanied by hallucinations.			
10. An individual with bipolar disorder is sometimes unpredictable because their mood fluctuates between depression and mania.			
11. One of the main causes of mental illness is a lack of self-discipline and will-power.			
12. A person with a mental illness is more dangerous than a person without a mental illness.			

Statement	True	False	Don't Know
13. The best way to deal with an inmate displaying signs of a mental illness is to set firm limits and make it clear that the officers are in charge.			
14. When an inmate is paranoid and believes that everyone is out to get them, it is best to play along with them to get them to do what you want.			
15. If an inmate is threatening to harm themselves or others, it is best to approach them with an aggressive response.			

IV. Encounters with Inmates with a Mental Illness

16. Within the last month, how many times have you encountered an inmate displaying signs of a mental illness in the following situations?

_____As a victim (of an attack, exploitation, stolen belongings, etc.)

_____As a perpetrator (of a physical attack, exploitation, stolen belongings, etc.) on another inmate

_____As a perpetrator of an attack on a correctional officer

_____As a subject of a rule violation

_____As a danger to themselves

17. Within the last month, how many times have you formally intervened with an inmate displaying signs of a mental illness? _____

17a. How many of these interventions have involved the removal of an inmate displaying signs of a mental illness from a situation without disciplinary action or a mental health referral?_____

17b. How many of these interventions have resulted in a mental health referral? _____

17c. How many of these interventions have resulted in a disciplinary action? _____

18. In your experience, what is the most common reason for intervening with an inmate displaying signs of a mental illness? (Please check the most appropriate response)

- ☐ The inmate is a victim (of an attack, exploitation, stolen belongings, etc.)
- ☐ The inmate is a perpetrator (of an attack, exploitation, stolen belongings, etc.) on another inmate
- ☐ The inmate is a perpetrator of an attack on a correctional officer
- ☐ The inmate is the subject of a rule violation
- ☐ The inmate is a danger to themselves
- ☐ Other _____(Please specify)

19. In your experience, how often do you encounter the same inmates displaying signs of a mental illness?

- ☐ Never
- ☐ Sometimes
- ☐ Often
- ☐ Always

20. In your experience, how often do you use verbal de-escalation skills when responding to incidents involving an inmate displaying signs of a mental illness?

- ☐ Never
- ☐ Sometimes
- ☐ Often
- ☐ Always

Please indicate your level of agreement with the following statements:

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
21. It is my professional duty as a correctional officer to intervene when I encounter an inmate displaying signs of a mental illness that I perceive poses a threat to themselves or others.					

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
22. It is my professional duty as a correctional officer to intervene when I encounter an inmate displaying signs of a mental illness that seems unable to care for themselves.					
23. The criminal justice system should be utilized to rehabilitate persons with a mental illness.					
24. In general, it can be advantageous to use verbal de-escalation skills versus physical intervention when responding to inmates displaying signs of a mental illness					
25. I am comfortable using verbal de-escalation as opposed to physical force when responding to persons displaying signs of a mental illness until I feel my safety is threatened.					
26. The type of intervention skills (i.e. verbal de-escalation or physical force) used can impact the intensity and duration of incidents involving an inmate displaying signs of a mental illness.					

V. Self-Efficacy in Incidents Involving Persons Displaying Signs of a Mental Illness

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
27. I am confident in my ability to recognize signs and symptoms of mental illness among inmates.					
28. I know how to effectively communicate with inmates displaying signs of a mental illness.					
29. I am comfortable interacting with inmates displaying signs of a					

mental illness.					
30. I am confident in my ability to defuse aggression before it becomes violence (verbal de-escalation).					
31. I feel well-prepared to respond to an incident involving an inmate engaging in self-harming behavior or threatening suicide.					
32. I possess the skills needed to effectively manage any type of mental health crisis.					

VI. Perceptions of Mental Health Services in the Community

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
33. I am well aware of the guidelines surrounding civil commitment in Florida (Baker Act).					
34. I am knowledgeable about the mental health services that are available in my community.					
35. The mental health services available in my community effectively meet the needs of persons with a mental illness.					
36. The mental health services in my community need to be improved.					
37. I am satisfied with the mental health referral process in my community.					
38. The mental health referral process is more difficult than jail admission in my community.					
39. Persons with a mental illness receive effective mental health treatment in jail.					

40. I am satisfied with the options that are available to me when resolving a mental health crisis in my correctional facility.					

VII. Crisis Intervention Team Implementation

41. Are you aware of a formal policy within your department providing guidelines for the Crisis Intervention Team model?

- ☐ Yes
- ☐ No
- ☐ Don't Know

→ **41a.** If you answered "yes" to question 41, do you clearly understand this policy?

- ☐ Yes
- ☐ No

Please indicate your level of agreement with the following statements:

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
42. The crisis intervention team in my agency serves as a specialty unit that is deployed to manage mental health crises.					
43. The crisis intervention team is discussed regularly in my agency.					
44. Correctional officers are exposed to the crisis intervention team model early on in their work.					
45. Every officer in my agency is expected to understand the role of the crisis intervention team.					
46. CIT is perceived favorably by most supervisors in my agency.					
47. All officers in my agency should receive CIT training.					

Law Enforcement Officers Post-Test Survey

Unique ID: _____
(First two letters of high school attended,
Day of the month you were born, & Middle Initial or "X")

Email Address:_____ ___

I. Knowledge and Perceptions of Mental Illness

1. **Please indicate which of the following behaviors you typically associate with mental illness: (Check the appropriate boxes):**

Statement	Yes	No	Don't Know
Dramatic mood swings			
Auditory and/or visual hallucinations			
Slurred speech			
Inappropriate emotional responses			
Excessive paranoia			
Incoherent rambling			
Manipulative personality			
Violence and aggression			
Disorderly conduct			
Obsessive compulsions			
Delusional thoughts			
Uncontrollable crying			

Please check the boxes that correspond with your responses to the following statements:

Statement	True	False	Don't Know
2. When someone has a mental illness, their brain is impaired in a way that affects their behavior and emotions.			
3. An individual with a developmental disorder is likely to respond to a command differently than an individual with a mood disorder.			
4. Schizophrenia is a mental illness that is often accompanied by hallucinations.			

5. An individual with bipolar disorder is sometimes unpredictable because their mood fluctuates between depression and mania.			
6. One of the main causes of mental illness is a lack of self-discipline and will-power.			
7. A person with a mental illness is more dangerous than a person without a mental illness.			
8. The best way to deal with a person displaying signs of a mental illness is to set firm limits and make it clear that the officers are in charge.			
9. When an individual is paranoid and believes that everyone is out to get them, it is best to play along with them to get them to do what you want.			
10. If a person is threatening to harm themselves or others, it is best to approach them with an aggressive response.			

II. Encounters with Persons with a Mental Illness

Please check the box that corresponds with your level of agreement with the following statements:

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
11. It is my professional duty as a law enforcement officer to intervene when I encounter an individual displaying signs of a mental illness that I perceive poses a threat to themselves or others.					
12. It is my professional duty as a law enforcement officer to intervene when I encounter an individual displaying signs of a mental illness that seems unable to care for themselves.					
13. The criminal justice system should be utilized to rehabilitate persons with a mental illness.					
14. In general, it can be advantageous to use verbal de-escalation skills versus physical intervention when responding to persons displaying signs of a mental illness					
15. I am comfortable using verbal de-escalation as opposed to physical force when responding to persons displaying signs of a mental illness until I feel my					

safety is threatened.					
16. The type of intervention skills (i.e. verbal de-escalation or physical force) used can impact the intensity and duration of incidents involving a person displaying signs of a mental illness.					

III. Self-Efficacy When Handling Incidents Involving Persons Displaying Signs of a Mental Illness

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
17. I am confident in my ability to recognize signs and symptoms of mental illness among individuals that I encounter in the community.					
18. I know how to effectively communicate with persons displaying signs of a mental illness.					
19. I am comfortable interacting with persons displaying signs of a mental illness.					
20. I am confident in my ability to defuse aggression before it becomes violence (verbal de-escalation).					
21. I feel well-prepared to respond to an incident involving a person engaging in self-harming behavior or threatening suicide.					
22. I possess the skills needed to effectively manage any type of mental health crisis.					

IV. Perceptions of Mental Health Services in the Community

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
23. I am well aware of the guidelines surrounding civil commitment in Florida (Baker Act).					
24. I am knowledgeable about the mental health services that are available in my					

community.					
25. The mental health services available in my community effectively meet the needs of persons with a mental illness.					
26. The mental health services in my community need to be improved.					
27. I am satisfied with the mental health referral process in my community.					
28. The mental health referral process is more difficult than jail admission in my community.					
29. Persons with a mental illness receive effective mental health treatment in jail.					
30. I am satisfied with the options that are available to me when resolving a mental health crisis in the community.					

VI. Crisis Intervention Team Implementation

31. Are you aware of a formal policy within your department providing guidelines for the Crisis Intervention Team model?

- ☐ Yes
- ☐ No
- ☐ Don't Know

→ **31a.** If you answered "yes" to question 31, do you clearly understand this policy?

- ☐ Yes
- ☐ No

Please check the box that corresponds with your level of agreement with the following statements:

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
32. The crisis intervention team in my department serves as a specialty unit that is deployed to manage mental health crises that occur in the community.					

33. The crisis intervention team is discussed regularly in my department.					
34. Law enforcement officers are exposed to the crisis intervention team model early on in their work in my department.					
35. Every officer in my department is expected to understand the role of the crisis intervention team.					
36. CIT is perceived favorably by most supervisors in my department.					
37. All officers in my department should receive CIT training.					

Correctional Officers Post-Test Survey

Unique ID: _____
(First two letters of high school attended,
Day of the month you were born, & Middle Initial or "X")

Email Address:_____

I. Knowledge and Perceptions of Mental Illness

1. **Please indicate which of the following behaviors you typically associate with mental illness: (Check the appropriate boxes):**

Statement	Yes	No	Don't Know
Dramatic mood swings			
Auditory and/or visual hallucinations			
Slurred speech			
Inappropriate emotional responses			
Excessive paranoia			
Incoherent rambling			
Manipulative personality			
Violence and aggression			
Disorderly conduct			
Obsessive compulsions			
Delusional thoughts			
Uncontrollable crying			

Please check the boxes that correspond with your responses to the following statements:

Statement	True	False	Don't Know
2. When someone has a mental illness, their brain is impaired in a way that affects their behavior and emotions.			
3. An individual with a developmental disorder is likely to respond to a command differently than an individual with a mood disorder.			
4. Schizophrenia is a mental illness that is often accompanied by hallucinations.			
5. An individual with bipolar disorder is sometimes unpredictable because their mood fluctuates between depression and mania.			
6. One of the main causes of mental illness is a lack of self-discipline and will-power.			
7. An inmate with a mental illness is more dangerous than a person without a mental illness.			
8. The best way to deal with an inmate displaying signs of a mental illness is to set firm limits and make it clear that the officers are in charge.			
9. When an inmate is paranoid and believes that everyone is out to get them, it is best to play along with them to get them to do what you want.			
10. If an inmate is threatening to harm themselves or others, it is best to approach them with an aggressive response.			

II. Encounters with Inmates with a Mental Illness

Please check the box that corresponds with your level of agreement with the following statements:

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
11. It is my professional duty as a correctional officer to intervene when I encounter an inmate displaying signs of a mental illness that I perceive poses a threat to themselves or others.					
12. It is my professional duty as a correctional officer to intervene when I encounter an inmate displaying signs of a mental illness that seems unable to care for themselves.					

13. The criminal justice system should be utilized to rehabilitate persons with a mental illness.					
14. In general, it can be advantageous to use verbal de-escalation skills versus physical intervention when responding to inmates displaying signs of a mental illness					
15. I am comfortable using verbal de-escalation as opposed to physical force when responding to persons displaying signs of a mental illness until I feel my safety is threatened.					
16. The type of intervention skills (i.e. verbal de-escalation or physical force) used can impact the intensity and duration of incidents involving an inmate displaying signs of a mental illness.					

III. Self-Efficacy in Incidents Involving Persons Displaying Signs of a Mental Illness

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
17. I am confident in my ability to recognize signs and symptoms of mental illness among inmates.					
18. I know how to effectively communicate with inmates displaying signs of a mental illness.					
19. I am comfortable interacting with inmates displaying signs of a mental illness.					
20. I am confident in my ability to defuse aggression before it becomes violence (verbal de-escalation).					
21. I feel well-prepared to respond to an incident involving an inmate engaging in self-harming behavior or threatening suicide.					
22. I possess the skills needed to effectively manage any type of mental health crisis.					

IV. Perceptions of Mental Health Services in the Community

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
23. I am well aware of the guidelines surrounding civil commitment in Florida (Baker Act).					
24. I am knowledgeable about the mental health services that are available in my community.					
25. The mental health services available in my community effectively meet the needs of persons with a mental illness.					
26. The mental health services in my community need to be improved.					
27. I am satisfied with the mental health referral process in my community.					
28. The mental health referral process is more difficult than jail admission in my community.					
29. Persons with a mental illness receive effective mental health treatment in jail.					
30. I am satisfied with the options that are available to me when resolving a mental health crisis in my correctional facility.					

VII. Crisis Intervention Team Implementation

31. Are you aware of a formal policy within your department providing guidelines for the Crisis Intervention Team model?

☐ Yes

☐ No

☐ Don't Know

→ **31a.** If you answered "yes" to question 31, do you clearly understand this policy?

☐ Yes

☐ No

Please check the box that corresponds with your level of agreement with the following statements:

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
32. The crisis intervention team in my agency serves as a specialty unit that is deployed to manage mental health crises.					
33. The crisis intervention team is discussed regularly in my agency.					
34. Correctional officers are exposed to the crisis intervention team model early on in their work.					
35. Every officer in my agency is expected to understand the role of the crisis intervention team.					
36. CIT is perceived favorably by most supervisors in my agency.					
37. All officers in my agency should receive CIT training.					

Law Enforcement Officers Follow-Up Survey

Unique ID_____
(Example: WH22L)
(First two letters of high school you attended,
Day of the month you were born, and
Your middle initial or "X")

I. Encounters with Persons with a Mental Illness

1. Within the last month, how many times have you encountered a person displaying signs of a mental illness in the following situations?

_____As a victim of a crime

_____As a witness to a crime

_____As a suspected offender

_____As a subject of a call for assistance

_____As a subject that is posing a danger to themselves or others

2. Within the last month, how many times have you formally intervened with a person displaying signs of a mental illness while on duty? _____

2a. How many of these interventions have involved the removal of a person displaying signs of a mental illness from a situation without an arrest or mental health referral?_____

2b. How many of these interventions have resulted in a mental health referral? _____

2c. How many of these interventions have resulted in an arrest? _____

3. Within the last month, how many times have you used the verbal and nonverbal de-escalation techniques you were taught in CIT training when responding to an incident involving a person displaying signs of a mental illness? _____

3a. In how many of these instances have the verbal de-escalation techniques effectively decreased the tension in mental health crisis situations? _____

3b. In how many of these instances have the verbal de-escalation techniques effectively reduced the duration of mental health crisis situations? _____

3c. In how many of these instances have the verbal de-escalation techniques helped return the person displaying signs of a mental illness to a competent level of functioning? _____

4. What percentage of your citizen encounters while on duty involve persons displaying signs of a mental illness?

☐ Less than 5%

☐ 6-10%

☐ 11-15%

☐ 16-20%

☐ Over 20%

5. Please indicate how important the following factors are in your <u>decision to employ the de-escalation skills you acquired in CIT</u> when responding to incidents involving a person with a mental illness. Circle the number that corresponds to your response: (1=No Importance, 2=Low Importance, 3=Moderate Importance, 4=High Importance)

Factor	None	Low	Moderate	High
Your prior experience with persons displaying signs of a mental illness.	1	2	3	4
Your previous encounters with this particular individual displaying signs of a mental illness.	1	2	3	4

The extent to which the individual with a mental illness poses a threat to self or others.	1	2	3	4
The seriousness of the situation (i.e. whether a crime has occurred, a victim is present, etc.)	1	2	3	4
Prior criminal history of individual displaying signs of a mental illness.	1	2	3	4
Whether the individual meets Baker Act criteria.	1	2	3	4
The presence of bystanders.	1	2	3	4
The apparent treatment needs of the person displaying signs of a mental illness	1	2	3	4
Departmental policies	1	2	3	4
Whether or not the individual appears to be under the influence of drugs and/or alcohol	1	2	3	4

7. **Please indicate how important the following factors are in your <u>decision to initiate a mental health referral rather than arrest</u> a person displaying signs of a mental illness. Circle the number that corresponds to your response: (1=No Importance, 2=Low Importance, 3=Moderate Importance, 4=High Importance)**

Factor	None	Low	Moderate	High
Your prior experience with persons displaying signs of a mental illness.	1	2	3	4
Your previous encounters with this particular individual displaying signs of a mental illness.	1	2	3	4
The extent to which the individual with a mental illness poses a threat to self or others.	1	2	3	4
The seriousness of the situation (i.e. whether a crime has occurred, a victim is present, etc.)	1	2	3	4
Prior criminal history of individual displaying signs of a mental illness.	1	2	3	4
Whether the individual meets Baker Act criteria.	1	2	3	4
The presence of bystanders.	1	2	3	4
The apparent treatment needs of the person displaying signs of a mental illness	1	2	3	4

The demeanor of the individual displaying signs of a mental illness.	1	2	3	4
Departmental policies	1	2	3	4
Whether or not the individual appears to be under the influence of drugs and/or alcohol	1	2	3	4

Please indicate your level of agreement with the following statements (check your response):

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
7. The criminal justice system should be utilized to rehabilitate persons with a mental illness.					
8. It is my professional duty as a law enforcement officer to intervene when I encounter an individual displaying signs of a mental illness that I perceive poses a threat to themselves or others.					
9. It is my professional duty as a law enforcement officer to intervene when I encounter an individual displaying signs of a mental illness that seems unable to care for themselves.					
10. In general, it can be advantageous to use verbal de-escalation skills versus physical intervention when responding to persons displaying signs of a mental illness.					
11. I am comfortable using verbal de-escalation as opposed to physical force when responding to persons displaying signs of a mental illness until I feel my safety is threatened.					
12. The type of intervention skills (i.e. verbal de-escalation or physical force) used can impact the intensity and duration of incidents involving a person					

displaying signs of a mental illness.					
13. All officers in my department should receive CIT training.					

II. Knowledge and Perceptions of Mental Illness

14. Please indicate which of the following behaviors you TYPICALLY (more often than not) associate with mental illness:

Statement	Yes	No	Don't Know
Dramatic mood swings			
Auditory and/or visual hallucinations			
Slurred speech			
Inappropriate emotional responses			
Excessive paranoia			
Incoherent rambling			
Manipulative personality			
Violence and aggression			
Disorderly conduct			
Obsessive compulsions			
Delusional thoughts			
Uncontrollable crying			

For the following questions, please check the most appropriate response:

Statement	True	False	Don't Know
15. When someone has a mental illness, their brain is impaired in a way that affects their behavior and emotions.			
16. An individual with a developmental disorder is likely to respond to a command differently than an individual with a mood disorder.			
17. Schizophrenia is a mental illness that is often accompanied by hallucinations.			

18. An individual with bipolar disorder is sometimes unpredictable because their mood fluctuates between depression and mania.			
19. One of the main causes of mental illness is a lack of self-discipline and will-power.			
20. A person with a mental illness is more dangerous than a person without a mental illness.			
21. The best way to deal with a person displaying signs of a mental illness is to set firm limits and make it clear that the officers are in charge.			
22. When an individual is paranoid and believes that everyone is out to get them, it is best to play along with them to get them to do what you want.			
23. If a person is threatening to harm themselves or others, it is best to approach them with an aggressive response.			

24. In the month since you completed CIT training, have you had the opportunity to use the knowledge and skills you acquired in the training?

☐ Yes

☐ No (If no, please skip question #25)

25. Please rate how useful the following knowledge components of CIT have been for you in the field since completing CIT training:

Statement	Not Useful	Somewhat useful	Very Useful	No Opportunity to Use Since Training
How to recognize signs and symptoms of various mental illnesses				
Pharmacology-Recognizing medications associated with different mental illnesses.				
How to distinguish between developmental disorders and mental illnesses.				
How to access available community mental health resources				
How to identify and respond to a person engaging in self-harming or suicidal behavior.				

Understanding the mental health referral process in your community.				
How to verbally de-escalate a person experiencing a mental health crisis.				
How to physically approach an individual experiencing a mental health crisis.				
How to manage situations involving veterans with Post-Traumatic Stress Syndrome				
Understanding how to identify mental health and substance abuse issues among children and adolescents.				

VI. Utilization of Mental Health Services in the Community

26. Please indicate whether your knowledge and perceptions of the mental health referral process and the CIT program have worsened, stayed the same, or improved since completing CIT training.

Statement	Worsened	Stayed the Same	Improved
Your ability to recognize when a Baker Act should be initiated.			
Your willingness to transport an individual to a psychiatric receiving facility or emergency room if they are in need of psychiatric treatment.			
Your ability to communicate with mental health providers			
Your understanding of the mental health referral process			
Your perception of mental health services in your community.			
Your knowledge of the written CIT policy in your department.			
Your perception of the importance of the CIT program in your community.			

V. Self-Efficacy in Incidents Involving Persons Displaying Signs of a Mental Illness

Please indicate your level of agreement with the following statements:

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
27. I am confident in my ability to recognize signs and symptoms of mental illness among inmates.					
28. I know how to effectively communicate with inmates displaying signs of a mental illness.					
29. I am comfortable interacting with inmates displaying signs of a mental illness.					
30. I am confident in my ability to defuse aggression before it becomes violence (verbal de-escalation).					
31. I feel well-prepared to respond to an incident involving an inmate engaging in self-harming behavior or threatening suicide.					
32. I possess the skills needed to effectively manage any type of mental health crisis.					

VII. Crisis Intervention Team in Your Department

33. Does your department have a CIT Coordinator that can address any questions you may have about CIT?

☐ Yes
☐ No

34. In your opinion, is CIT the most critical element of your departmental response to persons with a mental illness?

☐ Yes
☐ No

35. How often are CIT officers in your department dispatched to incidents involving persons with a mental illness?

- ☐ Never
- ☐ Sometimes
- ☐ Often
- ☐ Always

36. How often is your written departmental CIT policy followed by the following members of your department:

Dispatchers	**Other Officers**	**Supervisors**
☐ Never	☐ Never	☐ Never
☐ Sometimes	☐ Sometimes	☐ Sometimes
☐ Often	☐ Often	☐ Often
☐ Always	☐ Always	☐ Always

37. Please identify factors within your department or community that have made it easy for you to use the knowledge and skills you acquired in CIT:

_____
_____
_____

38. Please identify factors within your department or community that have made it difficult for you to use the knowledge and skills you acquired in CIT:

_____
_____
_____

39. Would you benefit from additional juvenile-specific training in the areas of mental health and substance abuse?

- ☐ Yes
- ☐ No

Correctional Officer Follow-Up Survey

Unique ID_____
(Example: WH22L)
(First two letters of high school you attended,
Day of month you were born,
Middle Initial or "X")

I. Encounters with Inmates with a Mental Illness

1. Within the last month, how many times have you encountered an inmate displaying signs of a mental illness in the following situations?

_____As a victim (of an attack, exploitation, stolen belongings, etc.)

_____As a perpetrator (of a physical attack, exploitation, stolen belongings, etc.) on another inmate

_____As a perpetrator of an attack on a correctional officer

_____As a subject of a rule violation

_____As a danger to themselves

2. Within the last month, how many times have you formally intervened with an inmate displaying signs of a mental illness? _____

2a. How many of these interventions have involved the removal of an inmate displaying signs of a mental illness from a situation without disciplinary action or a mental health referral?_____

2b. How many of these interventions have resulted in a mental health referral? _____

2c. How many of these interventions have resulted in a disciplinary action? _____

3. Within the last month, how many times have you used the verbal and nonverbal de-escalation techniques you were taught in CIT training when responding to an incident involving a person displaying signs of a mental illness? _____

3a. In how many of these instances have the verbal de-escalation techniques effectively decreased the tension in mental health crisis situations? _____

3b. In how many of these instances have the verbal de-escalation techniques effectively reduced the duration of mental health crisis situations? _____

3c. In how many of these instances have the verbal de-escalation techniques helped return the person displaying signs of a mental illness to a competent level of functioning? _____

4. What percentage of your encounters with inmates involve inmates displaying signs of a mental illness?

- ☐ Less than 5%
- ☐ 6-10%
- ☐ 11-15%
- ☐ 16-20%
- ☐ Over 20%

5. Please indicate how important the following factors are in your <u>decision to employ the de-escalation skills you acquired in CIT</u> when responding to incidents involving a person with a mental illness. Circle the number that corresponds to your response: (1=No Importance, 2=Low Importance, 3=Moderate Importance, 4=High Importance)

Factor	None	Low	Moderate	High
Your prior experience with inmates displaying signs of a mental illness.	1	2	3	4
Your previous encounters with this particular inmate displaying signs of a mental illness.	1	2	3	4
The extent to which the inmate with a mental illness poses a threat to self or others.	1	2	3	4
The seriousness of the situation (i.e. whether there is a rule violation, an assault on other inmates or staff)	1	2	3	4
Prior rule violations by the inmate displaying signs of a mental illness.	1	2	3	4
Whether the individual meets Baker Act criteria.	1	2	3	4
The presence of other inmates.	1	2	3	4
The apparent treatment needs of the inmate displaying signs of a mental illness	1	2	3	4
Departmental policies	1	2	3	4
Whether or not the inmate appears to be under the influence of drugs and/or alcohol	1	2	3	4

6. Please indicate how important the following factors are in your <u>decision to initiate a mental health referral within your institution rather than a disciplinary action</u> when responding to an inmate displaying signs of a mental illness. Circle the number that corresponds to your response: (1=No Importance, 2=Low Importance, 3=Moderate Importance, 4=High Importance)

Factor	None	Low	Moderate	High
Your prior experience with inmates displaying signs of a mental illness.	1	2	3	4
Your previous encounters with this particular inmate displaying signs of a mental illness.	1	2	3	4
The extent to which the inmate with a mental illness poses a threat to self or others.	1	2	3	4
The seriousness of the situation (i.e. whether there is a rule violation, an assault on other inmates or staff)	1	2	3	4
Prior rule violations by the inmate displaying signs of a mental illness.	1	2	3	4
Whether the inmate meets Baker Act criteria.	1	2	3	4
The presence of other inmates.	1	2	3	4
The apparent treatment needs of the inmate displaying signs of a mental illness	1	2	3	4
Departmental policies	1	2	3	4
The demeanor of the inmate displaying signs of a mental illness.	1	2	3	4
Whether or not the inmate appears to be under the influence of drugs and/or alcohol	1	2	3	4

Please check the box that indicates your level of agreement with the following statements:

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
7. The criminal justice system should be utilized to rehabilitate persons with a mental illness.					
8. It is my professional duty as a correctional officer to intervene when I encounter an inmate displaying signs of a mental illness that I perceive poses a					

threat to themselves or others.					
9. It is my professional duty as a correctional officer to intervene when I encounter an inmate displaying signs of a mental illness that seems unable to care for themselves.					
10. In general, it can be advantageous to use verbal de-escalation skills versus physical intervention when responding to inmates displaying signs of a mental illness					
11. I am comfortable using verbal de-escalation as opposed to physical force when responding to persons displaying signs of a mental illness until I feel my safety is threatened.					
12. The type of intervention skills (i.e. verbal de-escalation or physical force) used can impact the intensity and duration of incidents involving an inmate displaying signs of a mental illness.					
13. All officers in my department should receive CIT training.					

II. Knowledge and Perceptions of Mental Illness

14. Please indicate which of the following behaviors you TYPICALLY (more often than not) associate with mental illness:

Statement	Yes	No	Don't Know
Dramatic mood swings			
Auditory and/or visual hallucinations			
Slurred speech			
Inappropriate emotional responses			
Excessive paranoia			
Incoherent rambling			
Manipulative personality			
Violence and aggression			

Disorderly conduct			
Obsessive compulsions			
Delusional thoughts			
Uncontrollable crying			

For the following questions, please check the most appropriate response:

Statement	True	False	Don't Know
15. When someone has a mental illness, their brain is impaired in a way that affects their behavior and emotions.			
16. An individual with a developmental disorder is likely to respond to a command differently than an individual with a mood disorder.			
17. Schizophrenia is a mental illness that is often accompanied by hallucinations.			
18. An individual with bipolar disorder is sometimes unpredictable because their mood fluctuates between depression and mania.			
19. One of the main causes of mental illness is a lack of self-discipline and will-power.			
20. An inmate with a mental illness is more dangerous than a person without a mental illness.			
21. The best way to deal with an inmate displaying signs of a mental illness is to set firm limits and make it clear that the officers are in charge.			
22. When an inmate is paranoid and believes that everyone is out to get them, it is best to play along with them to get them to do what you want.			
23. If an inmate is threatening to harm themselves or others, it is best to approach them with an aggressive response.			

24. In the month since you completed CIT training, have you had the opportunity to use the knowledge and skills you acquired in the training?

☐ Yes

☐ No (If no, please skip question #25)

25. Please rate how useful the following knowledge components of CIT have been for you in the field since completing CIT training:

Statement	Not Useful	Somewhat useful	Very Useful	No Opportunity to Use Since Training
How to recognize signs and symptoms of various mental illnesses				
Pharmacology-Recognizing medications associated with different mental illnesses.				
How to distinguish between developmental disorders and mental illnesses.				
How to access available community and institutional mental health resources				
How to identify and respond to an inmate engaging in self-harming or suicidal behavior.				
Understanding the mental health referral process within your institution.				
How to verbally de-escalate an inmate experiencing a mental health crisis.				
How to physically approach an inmate experiencing a mental health crisis.				
How to manage inmates that are veterans with Post-traumatic stress syndrome.				

VI. Utilization of Mental Health Services in the Community

26. Please indicate whether your knowledge and perceptions of the mental health referral process and the CIT program have worsened, stayed the same, or improved since completing CIT training.

Statement	Worsened	Stayed the Same	Improved
Your ability to recognize when a mental health referral should be initiated.			
Your willingness to consult with mental health staff regarding an inmate that may need psychiatric treatment.			

Your ability to communicate with mental health staff.			
Your understanding of the mental health referral process in your correctional facility.			
Your perception of mental health services in your correctional facility.			
Your knowledge of the written CIT policy in your department.			
Your perception of the importance of the CIT program in your community.			

V. Self-Efficacy in Incidents Involving Persons Displaying Signs of a Mental Illness

Please indicate your level of agreement with the following statements:

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
27. I am confident in my ability to recognize signs and symptoms of mental illness among inmates.					
28. I know how to effectively communicate with inmates displaying signs of a mental illness.					
29. I am comfortable interacting with inmates displaying signs of a mental illness.					
30. I am confident in my ability to defuse aggression before it becomes violence (verbal de-escalation).					
31. I feel well-prepared to respond to an incident involving an inmate engaging in self-harming behavior or threatening suicide.					
32. I possess the skills needed to effectively manage any type of mental health crisis.					

VII. Crisis Intervention Team in Your Department

33. Does your department have a CIT Coordinator that can address any questions you may have about CIT?

☐ Yes
☐ No

34. In your opinion, is CIT the most critical element of your correctional facility's response to inmates with a mental illness?

☐ Yes
☐ No

35. How often are CIT officers in your facility dispatched to incidents involving inmates with a mental illness?

☐ Never
☐ Sometimes
☐ Often
☐ Always

36. How often is your written departmental CIT policy followed by the following members of your department:

Dispatchers	**Other Officers**	**Supervisors**
☐ Never	☐ Never	☐ Never
☐ Sometimes	☐ Sometimes	☐ Sometimes
☐ Often	☐ Often	☐ Often
☐ Always	☐ Always	☐ Always

37. Please identify factors within your correctional facility or community that have made it easy for you to use the knowledge and skills you acquired in CIT:

_____
_____
_____

38. Please identify factors within your correctional facility or community that have made it difficult for you to use the knowledge and skills you acquired in CIT:

_____
_____
_____

39. Would you benefit from additional juvenile-specific training in the areas of mental health and substance abuse?

☐ Yes
☐ No

Crisis Intervention Team (CIT) Agency Representative Survey

Unique ID: _____
(First two letters of the name of the high school you attended, the day of the month on which you were born, and your middle initial or "x") (Example: HI15L)

Age: _____

Sex: _____

Rank: _____

Years of Service Total: _____

Years of Service as Agency CIT Coordinator: _____

Agency Name: _____

Please provide a brief answer to the following questions:

4) How did you first learn about the Memphis CIT model?
5) What year did your agency implement CIT?
6) Did a tragic or controversial event involving a person with a mental illness prompt your agency to implement CIT? If yes, please explain.
7) Did communication with other criminal justice agencies play a role in your agency's decision to implement CIT? If yes, please explain.
8) Did mental health providers and/or advocacy groups influence your agency's decision to adopt the CIT model? If yes, please explain.
9) How does your agency evaluate the CIT training curriculum?
10) How does your agency evaluate the overall impact of the CIT program on your departmental response to mental health crises?
11) Does your agency have a dedicated line item in their annual budget to support the CIT program?

12) Has your agency assigned staff to manage the CIT program? If yes, is it a full-time position or one among other duties? What are their responsibilities?
13) Is the CIT model perceived favorably by most supervisors in your department?
14) Does your agency have a formal written CIT policy?
15) Approximately what percentage of the officers in your department have received CIT training? Would your organization like to have all officers trained in CIT?
16) What is the recruitment process for getting officers in your agency to attend CIT training?
17) Does every officer receiving the training automatically become part of the "Crisis Intervention Team" in your agency?
18) How many psychiatric receiving facilities are available to officers from your agency?
19) In what way(s) has the mental health referral process changed for officers in your agency since implementing the CIT program?
20) What are some of the challenges your agency faced when implementing CIT?
21) Does your agency have a positive relationship with local mental health providers and/or advocacy organizations?
22) What are the specific goals of the CIT program in your agency? Does it effectively achieve these goals?
23) If the administration in your agency were to change, do you think your agency would maintain a commitment to CIT?

Instructions: If you are a CIT Coordinator for a law enforcement agency, please answer questions 23-25. If you are a CIT Coordinator for a correctional agency, please answer questions 26-28. If you are the CIT Coordinator for both a law enforcement and correctional agency, please answer all of the remaining questions.

Law Enforcement-Specific Questions:

23.) Is the Crisis Intervention Team treated as a specialty unit in your agency?

☐ No

☐ Yes

24.) What triggers the dispatch of a CIT-trained officer to calls for service in your agency?

_____

_____

_____

25.) Please indicate to what degree the implementation of CIT has impacted the following:

Aspect of Your Agency	Declined Greatly	Declined Slightly	Stayed the Same	Improved Slightly	Improved Greatly
Incidence of officer injury in situations involving persons with a mental illness					
Incidence of injury to persons with a mental illness when coming into contact with officers from your department.					
Use of force in situations involving persons with a mental illness					
Use of SWAT or Hostage Negotiation Teams					
Incidence of officer injury in situations involving persons					

with a mental illness					

Correctional-Specific Questions:

26.) Is the Crisis Intervention Team treated as a specialty unit in your agency?

☐ No

☐ Yes

27.) What situation(s) trigger a CIT-trained officer response in your correctional facility?

_____

_____

_____

28.) Please indicate to what degree the implementation of CIT has impacted the following:

Aspect of Your Agency	Declined Greatly	Declined Slightly	Stayed the Same	Improved Slightly	Improved Greatly
Incidence of officer injury in situations involving inmates with a mental illness					
Incidence of inmate injury when correctional officers respond to mental health crisis situations in your correctional facility					
Use of force in situations involving inmates with a mental illness					
Use of cell extraction teams to manage inmates with a mental illness.					
Use of segregation or isolation for the control of inmates with a mental illness					

APPENDIX B: IRB DOCUMENTATION

University of Central Florida Institutional Review Board
Office of Research & Commercialization
12201 Research Parkway, Suite 501
Orlando, Florida 32826-3246
Telephone: 407-823-2901 or 407-882-2276
www.research.ucf.edu/compliance/irb.html

Approval of Human Research

From: **UCF Institutional Review Board #1**
FWA00000351, IRB00001138

To: **Megan L. Magers**

Date: **May 23, 2012**

Dear Researcher:

On 5/23/2012, the IRB approved the following human participant research until 5/22/2013 inclusive:

Type of Review:	UCF Initial Review Submission Form
Project Title:	A Comprehensive Examination of the Crisis Intervention Team (CIT) Model as an Institutionalized Practice in Criminal Justice Agencies in Florida
Investigator:	Megan L Magers
IRB Number:	SBE-12-08460
Funding Agency:	
Grant Title:	
Research ID:	NA

The Continuing Review Application must be submitted 30days prior to the expiration date for studies that were previously expedited, and 60 days prior to the expiration date for research that was previously reviewed at a convened meeting. Do not make changes to the study (i.e., protocol, methodology, consent form, personnel, site, etc.) before obtaining IRB approval. A Modification Form **cannot** be used to extend the approval period of a study. All forms may be completed and submitted online at https://iris.research.ucf.edu .

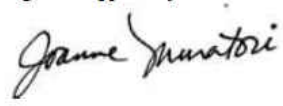
If continuing review approval is not granted before the expiration date of 5/22/2013, approval of this research expires on that date. When you have completed your research, please submit a Study Closure request in iRIS so that IRB records will be accurate.

Use of the approved, stamped consent document(s) is required. The new form supersedes all previous versions, which are now invalid for further use. Only approved investigators (or other approved key study personnel) may solicit consent for research participation. Participants or their representatives must receive a copy of the consent form(s).

In the conduct of this research, you are responsible to follow the requirements of the Investigator Manual.

On behalf of Sophia Dziegielewski, Ph.D., L.C.S.W., CF IRB Chair, this letter is signed by:

Signature applied by Joanne Muratori on 05/23/2012 03:09:48 PM EDT



IRB Coordinator

A Comprehensive Examination of the Crisis Intervention Team (CIT) Model as an Institutionalized Practice in Criminal Justice Agencies in Florida

Informed Consent

Principal Investigator:	Megan Magers, M.S.
Faculty Supervisor:	Roberto Hugh Potter, PhD
Investigational Site(s):	Criminal Justice Training Facilities in the following Florida counties: Alachua, Brevard, Broward, Escambia, Flagler, Hillsborough, Orange, Osceola, Palm Beach, Polk, Sarasota, Seminole, Volusia

Introduction: This research project will explore the effectiveness of the Crisis Intervention Team (CIT) training curriculum in several Florida counties. This study is particularly interested in measuring the impact of the training on law enforcement and correctional officers receiving the training. This study will also explore the degree to which the skills and knowledge obtained from the training are being utilized by CIT trained officers. You are being asked to participate in this research study because you are a law enforcement or correctional officer receiving CIT training in Florida. You must be 18 years of age or older to be included in this study.

This research study is part of a dissertation project being conducted by Megan Magers, MS within the Department of Criminal Justice at the University of Central Florida (UCF). Because the researcher is a graduate student, she is being guided by Roberto Hugh Potter, PhD, a UCF faculty supervisor in the Department of Criminal Justice.

What you should know about a research study:

- Someone will explain this research study to you.
- A research study is something you volunteer for.
- Whether or not you take part is up to you.
- You should take part in this study only because you want to.
- You can choose not to take part in the research study.
- You can agree to take part now and later change your mind.
- Whatever you decide it will not be held against you.
- Feel free to ask all the questions you want before you decide.

Purpose of the research study: The purpose of this study is to examine the degree to which the CIT training curriculum is meeting the officer-level objectives specified by the Florida CIT Coalition. By surveying officers before and after they receive CIT training, the researcher can determine whether the objectives of the training are being met. This is achieved by documenting any changes in officer responses to survey questions that occurred as a result of the training. In addition, this study will

examine the utilization of the skills and knowledge obtained from CIT training within the law enforcement and correctional setting.

What you will be asked to do in the study: You will be asked to complete a paper questionnaire on the first and last day of your CIT training class. The questionnaires will inquire about your knowledge and perceptions of mental illness, your self-confidence when managing mental health crises, your perceptions and knowledge of mental health services in the community and the nature and extent of your encounters with persons with a mental illness. One month after you complete CIT training, you will receive an email from the researcher to request your participation in an online survey that will assess your knowledge retention and utilization of the skills you acquired from CIT training. You do not have to answer every question or complete every task. You can drop out of the study at any time. Your participation in this study will in no way influence your completion of CIT training.

Location: CIT Training Facility and online

Time required: Each questionnaire should take participants 10-15 minutes to complete.

Risks: There are no foreseeable risks associated with your participation in this study

Benefits: There are no expected benefits to you for taking part in this study.

Compensation or payment: There is no compensation or other payment to you for taking part in this study.

Confidentiality: At the beginning of the initial survey, you will be asked to create a unique identification code using the first two letters of the name of the high school you attended, the day of the month on which you were born, and your middle initial. If you have no middle initial or do not wish to provide it, you will be asked to place an X in that code. You will be asked to place this code at the top of each survey you choose to complete in this study. This code will be used to link your questionnaire responses provided on the first day of class to those provided on the last day of class and in the follow-up questionnaire. A self-generated unique identification code is a highly-regard method of maintaining confidentiality of research participants in longitudinal research.

You will be asked to provide a valid e-mail address for the sole purpose of emailing the link to the online follow-up survey. A key will be created connecting your unique identification code with your e-mail address. This key will be stored in a password protected computer drive separate from the survey responses to protect against any breaches of confidentiality. The hard copies of the forms on which you provided your email address and unique identification code will be stored in a locked file cabinet separate from the completed questionnaires. All hard copies and electronic files containing this identifying information will be destroyed once the final questionnaires have been received.

The paper questionnaires will be stored in a locked file cabinet, separate from any identifying information. The survey responses will be entered into a document that will be stored in a password protected computer drive. Only the researcher will have access to the identifying information and survey responses collected in this project. The findings from this study will be presented in aggregate form. Your responses will not be released to your employer or any other interested party, within the boundaries of the law.

Study contact for questions about the study or to report a problem: If you have questions, concerns, or complaints, please contact Megan Magers, Graduate Student, Department of Criminal Justice at (407) 823-2603 or email at mlmagers@knights.ucf.edu. You may also contact Roberto Hugh Potter, PhD, Faculty Supervisor, Department of Criminal Justice at (407) 823-1487 or email at rhpotter@ucf.edu.

IRB contact about your rights in the study or to report a complaint: Research at the University of Central Florida involving human participants is carried out under the oversight of the Institutional Review Board (UCF IRB). This research has been reviewed and approved by the IRB. For information about the rights of people who take part in research, please contact: Institutional Review Board, University of Central Florida, Office of Research & Commercialization, 12201 Research Parkway, Suite 501, Orlando, FL 32826-3246 or by telephone at (407) 823-2901. You may also talk to them for any of the following:

- Your questions, concerns, or complaints are not being answered by the research team.
- You cannot reach the research team.
- You want to talk to someone besides the research team.
- You want to get information or provide input about this research.

CONSENT TO PARTICIPATE IS IMPLIED WHEN THE PARTICIPANT RETURNS THE PARTIAL OR FULLY COMPLETED QUESTIONNAIRE TO THE RESEARCHER

Crisis Intervention Team (CIT) Coordinator Survey

Informed Consent

Principal Investigator: Megan Magers, M.S.

Faculty Supervisor: Roberto Hugh Potter, PhD

Investigational Site(s): Online

Introduction: The researcher recently surveyed law enforcement and correctional officers receiving Crisis Intervention Team (CIT) training in your county. The present study is an extension of that research project, which is a multi-faceted study aimed at evaluating this Memphis Crisis Intervention Team (CIT) Model throughout several Florida counties. The following counties are included in this study: Alachua, Brevard, Collier, Flagler, Hillsborough, Orange, Osceola, Palm Beach, Polk, Sarasota, and Volusia. These counties were selected because they train both law enforcement and correctional officers in CIT.

The current aspect of the study is interested in surveying CIT coordinators to explore the diffusion and institutionalization of the CIT model across the aforementioned Florida counties. Specifically, this study seeks to pinpoint the factors that prompt agencies to adopt the CIT model. In addition, this facet of the study is interested in measuring the impact of CIT adoption on law enforcement and correctional agencies. You are being asked to participate in this research study because you are a CIT coordinator in a law enforcement or correctional agency in one of the Florida counties included in this study. You must be 18 years of age or older to be included in this study.

This research study is part of a dissertation project being conducted by Megan Magers, MS within the Department of Criminal Justice at the University of Central Florida (UCF). Because the researcher is a graduate student, she is being guided by Roberto Hugh Potter, PhD, a UCF faculty supervisor in the Department of Criminal Justice.

Purpose of the research study: This research study seeks to identify factors that have played a role in the diffusion of CIT across several Florida counties. Additionally, this study is interested in measuring the degree to which the CIT model has permeated the organizational culture of law enforcement and correctional agencies in Florida.

What you will be asked to do in the study: A link to an online survey will be sent to you via email. This survey was created using the online survey development software Qualtrics. Your responses to the survey will be stored in the researcher's password protected Qualtrics account. Only the researcher will have access to your responses. You will be asked to click the link in the email that will redirect you to the online questionnaire. You do not have to answer every question or complete every task. You can drop out of the study at any time. The questionnaires will ask you questions pertaining to what prompted your agency to adopt CIT and how CIT has impacted your agency's response to mental illness.

Location: Online

Time required: The questionnaire should take participants approximately 15 minutes to complete.

Risks: There are no foreseeable risks associated with your participation in this study

Benefits: There are no expected benefits to you for taking part in this study.

Compensation or payment: There is no compensation or other payment to you for taking part in this study.

Confidentiality: At the beginning of the online questionnaire, you will be asked to create a unique identification code using the first two letters of the name of the high school you attended, the day of the month on which you were born, and your middle initial. If you have no middle initial or do not wish to provide it, you will be asked to place an X in that code. This code will be used to separate your survey responses from others. A self-generated unique identification code is a highly-regarded method of maintaining confidentiality of research participants.

The survey responses will be stored in a password-protected Qualtrics account, which is only accessible by the researcher until the survey closes on November 30th. At that time, the responses to the open-ended questions will be exported into a Word document for content analysis. The demographic information and responses to closed-ended questions will be exported to an Excel document for analysis. Both the Word document and Excel document will be stored on a password-protected computer drive. The researcher will be the only one with access to this information, thus ensuring confidentiality of the data collected. The findings will only be presented in aggregate form, further protecting the confidentiality of respondents. Your responses will not be released to your employer or any other interested party, within the boundaries of the law.

Study contact for questions about the study or to report a problem: If you have questions, concerns, or complaints, please contact Megan Magers, Graduate Student, Department of Criminal Justice at (407) 823-2603 or email at mlmagers@knights.ucf.edu. You may also contact Roberto Hugh Potter, PhD, Faculty Supervisor, Department of Criminal Justice at (407) 823-1487 or email at rhpotter@ucf.edu.

IRB contact about your rights in the study or to report a complaint: Research at the University of Central Florida involving human participants is carried out under the oversight of the Institutional Review Board (UCF IRB). This research has been reviewed and approved by the IRB. For information about the rights of people who take part in research, please contact: Institutional Review Board, University of Central Florida, Office of Research & Commercialization, 12201 Research Parkway, Suite 501, Orlando, FL 32826-3246 or by telephone at (407) 823-2901. You may also talk to them for any of the following:

- Your questions, concerns, or complaints are not being answered by the research team.
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CONSENT TO PARTICIPATE IS IMPLIED WHEN THE PARTICIPANT RETURNS THE PARTIAL OR FULLY COMPLETED QUESTIONNAIRE TO THE RESEARCHER

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Orlando, Florida 32826-3246
Telephone: 407-823-2901 or 407-882-2276
www.research.ucf.edu/compliance/irb.html

Approval of Exempt Human Research

From: **UCF Institutional Review Board #1**
FWA00000351, IRB00001138

To: **Megan L. Magers**

Date: **October 23, 2012**

Dear Researcher:

On 10/23/2012, the IRB approved the following activity as human participant research that is exempt from regulation:

Type of Review:	Exempt Determination
Project Title:	Crisis Intervention Team (CIT) Coordinator Survey
Investigator:	Megan L Magers
IRB Number:	SBE-12-08772
Funding Agency:	
Grant Title:	
Research ID:	N/A

This determination applies only to the activities described in the IRB submission and does not apply should any changes be made. If changes are made and there are questions about whether these changes affect the exempt status of the human research, please contact the IRB. When you have completed your research, please submit a Study Closure request in iRIS so that IRB records will be accurate.

In the conduct of this research, you are responsible to follow the requirements of the Investigator Manual.

On behalf of Sophia Dziegielewski, Ph.D., L.C.S.W., UCF IRB Chair, this letter is signed by:

Signature applied by Joanne Muratori on 10/23/2012 03:12:44 PM EDT

IRB Coordinator

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