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Evaluating the impact of a Jail Diversion Program on police officer's attitudes toward the mentally ill

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EVALUATING THE IMPACT OF A JAIL DIVERSION PROGRAM ON POLICE
OFFICER'S ATTITUDES TOWARD THE MENTALLY ILL

A dissertation presented

by

Sarah E. Abbott

To

The Law, Policy, and Society Program

In partial fulfillment of the requirements for the degree of

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EVALUATING THE IMPACT OF A JAIL DIVERSION PROGRAM ON ATTITUDES
TOWARD THE MENTALLY ILL

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Sarah E. Abbott

ABSTRACT OF DISSERTATION

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April 2011

ABSTRACT

“Evaluating the Impact of a Jail Diversion Program on Police Officer's Attitudes toward the Mentally Ill.”

Police departments across the United States estimate that between 7 and 10% of calls for service involve an individual with a mental illness. Responses to these calls are limited by inadequate officer training and a lack of understanding about the mentally ill and available resources to assist them. Police encounters with mentally ill persons can result in unnecessary arrests that might be avoided if clinical assistance were more readily available. Ranging from mental health training for officers to co-responder (clinician and officer) models, Jail Diversion Programs have emerged to reduce such arrests.

Research in this field has historically focused on the development of a typology of jail diversion activities, evaluating jail diversion rates, and assessing the immediate impact of mental health training on police officer attitudes towards the mentally ill. Co-responder models have received little attention in the literature and the research focusing on these models has been mostly descriptive. There have been no studies that evaluate the impact of a co-responder model on police officer attitudes. Seeking to fill this gap in the literature, the current research evaluates the impact of a co-responder Jail Diversion Program upon police officer attitudes toward individuals with a mental illness, in two Massachusetts communities. Officer attitudes were assessed using a questionnaire that incorporates material developed and validated by other researchers in the field.

The findings of this study reveal that officer's working in those departments with Jail Diversion Programs report greater tolerance and acceptance of mentally ill persons living in their communities and more strongly endorse their role in managing persons with mental illness than their counterparts in non- Jail Diversion Program departments. Though not the primary rationale behind the development of Jail Diversion Programs, its impact on the attitude of police officers toward the mentally ill may influence the tone, outcome and risks associated with these interactions and support additional replication and further consideration by policy makers. Having more tolerant, informed and confident police officers responding to calls involving the mentally ill may reduce officer-involved shootings and

injuries, which would benefit the community at large, the department they serve and the individual officers on the street who encounter individuals with a mental illness. The outcomes of this research support increased funding of pre-arrest co-responder Jail Diversion Programs.

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Chapter 1 Introduction

Problem Statement

In the community the police are very often the first to respond to individuals with a mental illness when they are in crisis (Lamb et al., 1995). Police departments across the country estimate that seven percent of all calls involve people with mental illness in crisis (Fischman, 2002). Medium and large police departments in the US estimate that ten percent of their calls involve someone with a mental illness (Watson, Morabito, Draine, & Ottati, 2008). In 1999, New York Police Department (NYPD) records revealed an average of 175 calls every day to respond to an 'emotionally disturbed person.' In addition to the frequency of the calls, police officers spend more time dealing with 'mental disturbance' calls than they do on calls for burglaries, assaults and traffic accidents combined (Cordner, 2006).

Academy training to prepare police officers for handling individuals with mental illness varies from state to state but is widely regarded as insufficient. The initial training of new NYPD recruits lasts for 8 months yet only 12 hours are devoted to dealing with individuals in psychiatric crisis (Cordner, 2006). In Massachusetts, the police academy is six months in duration which includes only four hours of training for 'dealing with emotionally disturbed persons.'

The large number of individuals with a mental illness in the criminal justice system has fueled policy attention in criminal justice and mental health arenas. Many police departments across the country have adopted specialized police and mental health partnerships with associated programming. Prior studies have determined that without additional training or access to specialized response programs, police officers have more negative attitudes toward individuals with a mental illness than toward the general population. Some of these attitudes include erroneous beliefs that individuals with a mental illness are always dangerous and violent, that they cannot care for themselves and that they need to be housed in a secure setting (Watson, Corrigan, Ottati, 2004). In addition to these negative attitudes, a lack of understanding about mental illness by police officers, who use traditional police tactics when responding to individuals with a mental illness, can lead to an escalation of techniques up to and including the use of force (Watson, Morabito, Draine, & Ottati, 2008).

While most police encounters with individuals with a mental illness involve a response for relatively minor or nuisance offenses, police encounters with persons experiencing a more acute set of symptoms can result in volatile

situations with risk of harm to both the responding officer and the individual. The *Los Angeles Times* reported that between 1994 and 1999, there were 37 incidents in which officers from the Los Angeles Police Department shot a mentally ill individual. Of those shootings, 25 were fatal (Berry & Meyer, 1999). Such fatal shootings have a profound impact not only on the victim's family, but also on the police officer involved and the community at large (Consensus Project, 2002). While there are no national or state-level data available to calculate the rate at which these occurrences take place, a web-based search of terms such as "police shoot mentally ill" revealed news accounts of such events nationwide. It is in light of these situations that the need for adequate training and/or mental health partnerships becomes apparent and research evaluating the impact of these partnerships on police attitudes and practice is illuminated.

Until the 1960's state run institutions have been the primary treatment facility for individuals with a mental illness in the US essentially isolating them from the rest of society. This isolation occurred for many reasons: the attitude of the public about people with mental illness, a belief that individuals with a mental illness could only be helped in such settings, and a lack of resources at the community level (Kliwer, McNally, & Trippany, 2008). The development of the first antipsychotic medication in 1954 coupled with the passage of the 1963 Community Mental Health Centers Act (CMHCA) opened the door for community-based treatment rather than lifelong institutionalization. This act not only restructured how services were provided but also who performed those services. No longer was treatment restricted to the medical professionals. Therapeutic services to individuals with a mental illness were now assigned to a host of community based non-medical professionals. Additionally, increased rights were afforded to individuals with a mental illness and commitment statutes were tightened, effectively restricting access to state institutions to the most severely impaired and/or dangerous individuals (Stubbs, 1998).

Advocates for deinstitutionalization expected the federal government to provide funding for these additional community-based mental health services. However, the money saved by limiting access to these expensive institutions was not transferred into additional community-based mental health services. Instead, the mental health system was placed under a great deal of strain as the number of people who required services far outweighed their availability. As a result of inadequate resources, the chronically mentally ill were being treated in communities, some of whose members were misinformed about the nature of mental illness and the risks posed by individuals

with a mentally illness. In addition, the community providers lacked the means to adequately treat these complicated mental health needs (Hurwitz, 2000). While the benefits of deinstitutionalization are apparent: independence and a chance at a better quality of life; the problems associated with these new found freedoms were significant. The individuals who received the benefits of deinstitutionalization often became homeless, isolated, and subsequently victimized. Some individuals who were now being treated in community based settings saw their symptoms deteriorate. While some were re-institutionalized, some died on the streets (Kliewer et al., 2008).

Individuals with a mental illness are often incarcerated because the community-based treatment programs are non-existent, full or difficult for police to access. Police have reported that they often arrest mentally ill individuals when treatment is not readily available (and they feel that the individual needs to be confined because of the danger s/he poses) (Abrams, 1991). In addition to the projected humanitarian outcomes, the predicted cost savings of deinstitutionalization were not fully realized. Dr. Fred Maue reports that in Pennsylvania, “state hospitals cost \$90-\$100,000 per year per patient,” while “in prison; a seriously mentally ill individual is imprisoned and treated for around \$35,000” (Human Rights Watch, 2003). According to the Department of Justice (1996), it costs approximately \$12 billion per year to house individuals with psychiatric disorders in jails and prisons (240,000 incarcerated individuals with mental illness at an average cost of \$50,000 per person annually).

Most studies suggest that approximately ten percent of prisoners have severe psychiatric disorders. It is estimated that 240,000 individuals with severe psychiatric disorders are incarcerated in the nation’s jails and prisons at any given time (Bureau of Justice Statistics, 2006). While the shortage of secure hospital settings has contributed to the number of mentally ill entering the criminal justice system, changes in sentencing guidelines, such as mandatory minimum sentences and three-strike laws have limited the ability of judges to take mental illness into consideration at sentencing. The 1990s “tough on crime” laws brought with them more punitive criminal justice policies. Tough on crime policies such as mandatory minimums and three strikes laws have increased the rate of incarceration in the US. Between 1980 and 2008, the number of individuals incarcerated in prisons grew from 319,598 to 1,518,559 and when including those in local jails, the number rose to over 2 million people in 2008 (Bureau of Justice Statistics, n.d.).

Sentencing reforms were driven in large part by the perception, and the public's fear, that serious and violent criminals were "getting off easy" (Biderman, 1995). In response to this public outrage, the likelihood that convicted offenders would go to prison increased as did the length of time they spent once in prison (Tonry, 1992). These same criminal justice policies have been promoted as providing increased protection for the public from serious and violent offenders, yet they also yielded high rates of confinement for non-violent offenders. Caught in the more punitive net, individuals convicted and sentenced for non-violent offenses increased more rapidly than the number of violent offenders (Gilliard & Beck, 1996).

Teplin (2000) found that not only is the probability of being arrested greater for suspects exhibiting symptoms of mental illness but a shortage of resources means that many individuals are unable to make bail and remain incarcerated in jails pending trial. The arrestee with a mental illness is often detained because they are considered to be a high risk for release under personal recognizance (Teplin, 2000). Additional studies have determined that people with mental illness are often charged by police with more serious offenses than non-mentally ill individuals arrested for similar behaviors (Hochstedler, 1987; Massaro, 2003). In addition, those with mental illness are often charged, convicted and sentenced more severely than others who have committed similar crimes (Massaro, 2003). In 1999, Ditton found that the mentally ill in state prisons across the US served an average of 15 months longer than other inmates charged and sentenced for similar crimes (Ditton, 1999).

Does incarceration exacerbate the symptoms of mental illness?

In 2002, the Council of State Governments Justice Center released a report detailing the outcomes and recommendations of their Criminal Justice/Mental Health Consensus Project. The project members met for two years and included national experts, policy makers, legislators and representatives from mental health and criminal justice disciplines. The report produced 47 policy statements which were developed to serve as a guide or to prompt initiatives designed to improve the criminal justice system's response to individuals with a mental illness (Consensus Project, 2002).

The Consensus Project determined that individuals with a mental illness spend between two and five times longer in jail either awaiting trials or on short sentences than persons without mental illness (Ditton, 1999). There is also a

significant clinical impact of “doing time.” The culture in jail differs greatly from the therapeutic hospital milieu, where behavioral expectations are reversed. Whereas openness and sharing of information is required in a group home/hospital setting, in jail, these behaviors can result in injury or even death. The prison inmates’ unwritten code of always projecting respect and strength can place the mentally ill inmate at increased risk. While individuals with mental illness are quite capable of showing respect and being strong, their desire to avoid being labeled as ‘crazy’ can deter them from taking ‘psych’ meds or going to see the psychiatrist. Without medications, individuals with severe mental illness can decompensate rapidly which can result in behaviors which be interpreted as disrespectful and weak by other prisoners. In addition to being labeled and stigmatized, the symptoms of untreated schizophrenia and paranoia can prompt an inmate’s placement in solitary confinement for observation. Sensory deprivation can exacerbate existing symptoms and lead to significant distress among inmates with mental illness (Haney, 2003).

People with mental illness often have difficulty complying with the strict prison rules, particularly when there is little flexibility in their enforcement. As a result, those who cannot comply with the rules are disproportionately represented among prisoners in isolation or segregation (Haney, 2003). Their rule-breaking can lead to increased punishment, particularly if they engage in aggressive or disruptive behavior. In 1999, the state of New Jersey settled a class action lawsuit brought against them by prisoners with a mental illness residing in the state prison system. A report issued by Dr. Koson, a correctional mental health expert in New Jersey states, “as a result of (the) disciplinary process that all but criminalizes the most common symptoms of mental illness as well as the lack of alternative housing facilities, mentally ill inmates are almost three times more likely to be found in administrative segregation than they are in general population” (DNJ, 1999, p.4). New Jersey settled the suit and agreed to spend \$18 million a year to improve the correctional mental health systems in the state-operated correctional facilities (DNJ, 1999).

In 2003, The Human Rights Watch issued a report on the conditions of prisons and jails in the US and their treatment of inmates with a mental illness. Human Rights Watch is a nonprofit, nongovernmental human rights organization made up of more than 275 members around the globe. Its staff consists of human rights professionals including country experts, lawyers, journalists, and academics of diverse backgrounds and nationalities. Their report states that the “prolonged solitary confinement” of prisoners may amount to torture or other cruel, inhumane or degrading treatment and punishment (Human Rights Watch, 2003). The European Committee for the Prevention of

Torture and Inhumane or Degrading Treatment or Punishment, which has reviewed a number of prison settings akin to U.S. segregation and “supermax” facilities, has noted that isolation can undermine reform and rehabilitation and can impair physical and mental health (Human Rights Watch, 2003). Forensic psychologist Keith Curry concluded that, based on his 2002 medical records review in eight Texas prisons, “of the 68 mentally ill inmates reviewed for whom the length of stay could be roughly estimated from the medical record, the average length of stay in segregation appeared to be 5.2 years with a range of one month to seventeen years” (Curry, in Human Rights Watch 2003, p. 153). In the same report, Dr. Terry Kupers identified another problem facing the mentally ill inmate: “Improper supervision and treatment can also leave the mentally ill vulnerable to each other. At the Phillips State Prison in Georgia in 2001, two prisoners who were mentally ill died violent deaths at the hands of other prisoners” (Kupers, in Human Rights Watch, 2003). Hans Toch’s study of prisoners led him to conclude that suicidal prisoners can be pushed over the edge and “pathologically fearful prisoners can regress into a psychologically crippling panic reaction” (Toch, 1975).

Prisoners with a mental illness in state prisons serve more time on average than other prisoners. These offenders average a total of 103 months in prison, 15 months longer than other offenders charged and sentenced for similar crimes. The largest differences in time served were among violent and property offenders. The mentally ill serve an average of at least 12 additional months for violent and property offenses (BJS, 1999). In the worst cases, prisoners with a mental illness face additional criminal charges for behavioral infractions committed while in prison. In California, for example, such prisoners can face life imprisonment under the three strikes laws (BJS, 1999). According to the Bureau of Justice Statistics (1999) 36.7 percent of mentally ill state prison inmates have been in fights since admission, compared to 24.4 percent of other prisoners. Similarly, 62.2 percent of mentally ill state prisoners have been charged with breaking prison rules, compared to 51.9 percent of other prisoners (BJS, 1999). Such rule violations, even if attributable to mental illness, are routinely punished without mercy as corrections officials feel they must apply the rules consistently if they are to maintain order.

A 2002 interview with the Superintendent of Graterford Prison in Pennsylvania revealed that in addition to the behavioral problems exhibited, once eligible for parole, mentally ill prisoners are also at greater risk than others of being denied parole when brought before a parole board. Concerned about their prison behavior and the mental

illness itself, parole boards don't want to chance it on releasing them (Human Rights Watch, 2000). In addition, the lack of adequate community services makes it difficult for parole boards to develop satisfactory post-release supervision and treatment plans. A recent study by Baillargeon et al., (2009) researched the association between co-occurring serious mental illness and substance abuse disorders and parole revocation in Texas. The retrospective cohort study included 8,149 inmates who were released over three months in 2006. The outcome of the study revealed that those with mental illness only (no substance abuse) demonstrated no increased risk of having their parole revoked on a technical violation or new criminal charges. The study did find that those with a co-occurring disorder had a substantially increased risk of having their parole revoked on a technical violation or as the result of a new set of charges (Baillargeon et al., 2009).

The literature strongly supports the hypothesis that there is a clinical impact of doing time. The evidence suggests that once incarcerated, the mentally ill spend more time in jails and prison than their non-mentally ill counterparts, spend increased time in segregation and are subject to further criminalization for their symptoms. Over the last twenty plus years, police departments across the United States have begun to address these issues by developing jail diversion programming to move low level misdemeanor offenders with a mental illness away from an arrest and into community based mental health treatment. There are clear and pressing reasons why the incarceration of low level nuisance mentally ill offenders should be avoided and diversion of the mentally ill should be considered as an alternative. In addition to responding to the needs of police departments, who are often unable to effectively respond to individuals with a mental illness, Jail Diversion Programs provide police with the tools which they need on these types of calls which enhance the chances of a more humane and clinically appropriate resolution for the individual in crisis; more compassionate justice for the mentally ill.

Chapter 2 Literature Review

Police Responses to Individuals with a Mentally Illness

A literature review revealed that the police mostly encounter the mentally ill when they are called out to their aid or in response to their erratic, disruptive, or annoying behaviors and not because they are engaged in a crime. However, because many of these behaviors fit the definition of minor crimes, arrest is a disposition choice for police officers (Teplin, 2000). Further examination of these scenarios reveals that police officers are usually the initial contact with the criminal justice system for these individuals and often for low level offenses. Tucker et al., (2008) suggest that there is a “disconnect in the process” (p. 236) from the first police contact to the individual receiving the appropriate level of care. They attribute this disconnect to a lack of appropriate police training, available resources and collaborative community support (Tucker et al., 2008).

Teplin (2000) reviewed the available literature to assess: the current role of the police in urban centers in keeping the peace with mentally ill individuals; the informal and formal law enforcement options being utilized with the mentally ill; and the number of mentally ill individuals in prisons and jails across the US. Teplin found that to a patrol officer, the successful resolution of a police encounter with a mentally ill person is one which at least holds through to the end of that officer’s shift. Teplin also found that in order to accomplish this ‘successful’ resolution, officers may feel compelled to remove the mentally ill person under two distinct circumstances: if the individual is publicly ‘exceeding community tolerance for deviant behavior;’ and when the officer feels that there is likelihood that without official action, the behavior will not stop and they will have to respond again (Teplin, 2000 p.13).

Under these circumstances the officer will decide either to initiate a transport to the hospital emergency room or to conduct an arrest. If the officer knows the individual and has had similar contacts with him/her in the past, an arrest may be more likely, particularly if the officer had initiated a psychiatric evaluation in the past which appears to have made no impact on the individual’s behavior (Teplin, 2000). By ‘resolving’ this issue for a few hours, police officers could therefore be assured that they would not have to come into contact with that individual again during their shift. As a result of the lack of appropriate mental health treatment options, arrest may have become the default choice for officers who wish to resolve such a call quickly. Typically persons with a mental illness are arrested for misdemeanor offenses which are often symptoms of their mental illness (Torrey, 1997). Abram and Teplin (1991)

state, “although American Bar Association (ABA) standards state that misdemeanants who are mentally ill should be diverted into the mental health system, in practice, they are often arrested” (p. 1036). Police officers have considerable discretion when determining what their response to a misdemeanor offence should be. Without clear and available alternatives to arrest, police officers may feel that arrest is their only option. However, “substantial discretion in arrest decisions raises some questions about equal justice. Without appropriate guidelines, similar behaviors could easily be described as criminal or psychiatric” (Cooper, 2004, p.297).

Mental health professionals have referred to the arrest of individuals with a mental illness for their symptoms as the ‘criminalization of mental illness’ (Teplin, 2000) and have noted that these same individuals who were previously treated by the mental health system have instead been “shunted into the criminal justice system” (Teplin, 2000, p. 12). Historically, this supposition has been largely supported by anecdotal evidence until Teplin’s 1984 study, during which, she observed 283 randomly selected police officers in a large northern city for 2,200 hours over a 14-month period to assess how they handled calls involving individuals with a mental illness (Teplin, 1984). The study revealed that the officers informally resolved the cases 72% of the time, arrested 16% of the individuals and transported to the hospital 12% of the cases (Teplin, 1984, p.9). In this study Teplin found that the probability of being arrested was 67% greater for individuals displaying symptoms of a mental illness compared with those who were not and concluded that “mentally ill citizens in the study were being treated as criminals” (Teplin, 2000, p. 12).

Unfortunately, police responses to individuals with more acute mental illness and associated symptoms have also resulted in outcomes for those individuals including serious injury or death. Police departments across the country have had officer involved shootings of persons with a mental illness and in states where police have shot and/or killed mentally ill individuals; the mental health community has led calls for increased police training in responding to the mentally ill. The Memphis, Tennessee Police Department significantly enhanced its training after police officers, responding to a 911 call, shot and killed a mentally ill man in 1988. Memphis created around-the-clock specialized Crisis Intervention Teams (CIT). Officers assigned to these teams spent 40 hours training with representatives of the mental health system. Part of the training involved learning how to talk to ‘mentally disturbed people’ during standoffs and studying the effects of various medications. This CIT model has been replicated in more than 50 law enforcement agencies nationwide (Consensus Project, 2002).

Other police departments have taken different steps to aid officers in responding to 911 calls regarding a mentally ill individual in the community. Pre-arrest co-responder jail diversion programs are designed to provide police officers immediate access to trained clinicians at the time that their discretion is being utilized. By providing an alternative disposition option for the police, clinicians can facilitate a therapeutic placement for the individual with a mental illness versus an arrest. With input from a trained clinician, police no longer have to shoulder the burden of making decisions without all the relevant information or resources at their fingertips. If the clinician is available and responds to the scene, the officer can feel comfortable with an arrest diversion, knowing that the individual will be receiving appropriate and needed treatment and not simply 'getting away with it.' The officer can therefore be freed up more quickly to continue with the 'real' police work; avoiding time spent arresting, booking and guarding the individual for a typically minor offence. If the offence is more serious, the officer can revert back to arresting the individual.

Research conducted on Jail Diversion Programs

A review of Jail Diversion Program literature reveals that diversion programs vary considerably in terms of point of intervention, location and scope and therefore the need for a uniform and concise definition of Jail Diversion programming is necessary. Draine and Solomon (1999) and Steadman et al. (2000) report that there are currently pre-arrest jail diversion and post-arrest jail diversion programming operating in the United States. Steadman et al. (2000) provide further categorization of jail diversion programs, "pre-booking, the diversion occurs before the arrest charges are filed and post-booking, occurs after the person is booked into jail with charges filed" (2000, p.645). Draine and Solomon (1999) offer a third category of diversion, "coterminous" which they define as a diversion which "occurs when an offender is taken into custody by the police and delivered into treatment while charges are still being filed. In this case, even though the offender has been arrested and a new charge was filed, the offender has been diverted from custody incarceration" (p.57). The Framingham Jail Diversion Program, the model evaluated in the current research, fits into the primary category of pre-arrest programming and also provides coterminous diversion when requested and appropriate.

A review of the literature reveals that there is a need for more comprehensive and rigorous evaluation of Jail Diversion Programs. The evaluation studies published to date focus on a handful of programs nationwide (Strauss et

al., 2005, Broner et al., 2004, Borum et al., 1998, Steadman and Naples., 2005, Teller et al., 2006, Steadman et al., 2000, Lamb et al., 1995). Additional studies have described the common elements in program design and contributed to the creation of a typology of jail diversion programs currently in operation (Hails and Borum, 2003, Steadman et al., 1999). There is a dearth of available studies which examine optimal staff patterns, impact on the participants, preferred program model by department size or long term recidivism. The literature review revealed that there is still a need for rigorous and ongoing evaluation of individual jail diversion programs, especially regarding their impact on the individuals they serve and the police officers who work within them. This gap in the literature coupled with the rapid expansion of police based diversion programs serve as primary reasons why this current research is needed.

Studies using a Quasi-Experimental Design

Strauss et al. (2005) examined the psychiatric disposition of patients brought by Crisis Intervention Team (CIT) police officers to an emergency psychiatric service in Louisville, Kentucky. The CIT officers were a select cadre of uniformed officers with specialized training to deal with the mentally ill in crisis (p. 224). The researchers were interested in whether there was a significant difference in the profile and disposition of patients brought in by CIT officers versus non-CIT referred psychiatric patients. In addition, the researchers examined whether CIT officers were making appropriate decisions in their identified referrals for the psychiatric emergency service (Strauss et al., 2005).

Strauss et al. collected data from the busiest psychiatric emergency room in the city over a one month time period in 2002. The data were obtained from the medical charts of 485 individuals who were psychiatrically evaluated during that month and analyzed using chi-square. Of those 485 patients, 79 or 16% were determined to have been referred by CIT officers. The study found that CIT referred patients did not differ in clinical profile, diagnosis, demographics or evaluation disposition from non-CIT referred patients in any significant way (Strauss et al., 2005 p. 228). The researchers also determined that CIT officers were able to accurately identify individuals in psychiatric crisis and made appropriate referrals to the psychiatric assessment team (p. 227). The study concluded that the CIT training was successful in its goal of training police officers to identify and refer individuals in psychiatric crisis for evaluation and treatment. It could be argued that because the police officers in this study volunteered for the training

and associated CIT unit assignment, they may have been more likely to refer the mentally ill for assessment without participating in the CIT training. Without a comparison group from the same department or a non-CIT department, the results of this study cannot be generalized. Additional limitations of the study include the small sample size and only one month's worth of data. Disposition information was incomplete and missing in 24% of the cases due to data entry errors (Strauss et al., 2005, p. 228).

In 2004, Broner et al. conducted a study using a quasi-experimental non-equivalent comparison group design to examine outcomes for participants in eight different jail diversion programs from across the country. The researchers compared those diverted by the jail diversion programs with a group of jail detainees who were eligible for diversion but who had not been diverted. Nearly 2000 participants were identified across the eight sites; 971 diverted individuals and 995 non-diverted individuals. Three- and six-month follow up interviews were conducted with 1500 and 1300 of the original study participants respectively. All participants in the study met the program criteria for diversion and had either been arrested (post-booking sites) or had police contact (pre-booking sites). Each site identified study participants for both groups, diverted and non-diverted, during the study intake period (October 1998-May 2000) and the researchers developed cross site questionnaires which were used at all eight sites. Although comparison subjects were not randomly selected, they were matched by several variables including crimes committed, prior involvement with the criminal justice system and demographic factors (p. 529).

Characteristics of the participants were described using means and the diverted and non-diverted groups scores were compared using t-test statistical analysis. Multivariate regression techniques were used to examine the effects of jail diversion on several outcomes of interest (Broner et al., 2004, p. 524). The focus of this research was the impact of jail diversion programming on 20 dependent variables including; rearrests, mental health functioning, substance abuse, quality of life and service utilization. The results of the analysis partially supported the hypotheses and found that diversion generally resulted in increased use of services and some improvement in the quality of life indicators, particularly living arrangements (p. 526).

The overall results revealed that individuals with mental illness or substance abuse disorders were successfully diverted from the criminal justice system either at the time of police contact or subsequently. The researchers also

concluded that there was a significant difference in the rate of re-arrest between the diverted (lower) and non-diverted (higher) groups in the year following the initial intervention (Broner et al., 2004 p. 537). The research design was weakened by a lack of comparability between the diverted and non-diverted groups and variation in the different program models being evaluated. Additionally, although the diverted participants received more initial services (emergency, hospitalizations and counseling) than the non-diverted participants, there were relatively small differences in the amount of treatment received at the three and twelve month assessment by both groups (between 1% and 15%) (Broner et al., 2004). These outcomes underscore the need for services to be readily available to recipients of jail diversion.

In 2005, Steadman and Naples conducted research into the effectiveness of Jail Diversion Programs for individuals with co-occurring disorders. From October 1998 to May 2000, three pre-arrest (Memphis TN; Montgomery County, PA; Multnomah County, OR) and three post-arrest Jail Diversion Programs (Phoenix/Tucson, AZ; Hartford, New Haven and Bridgeport, CT) identified diverted individuals who met the co-occurring disorder criteria for this study (individuals with co-occurring disorders have one or more disorders relating to the use of alcohol and/or other drugs of abuse as well as one or more mental disorders). Comparison (non-diverted) participants at each site were chosen from “populations with potentially similar participants” whose characteristics included being 18 and older, competent to give consent and willing to receive treatment (p. 165). In this study, a quasi-experimental nonequivalent comparison group design method was used. Participants were interviewed by research staff at baseline (1,612), three months (1,260) and twelve months (1,187) using a specially developed protocol. Approximately half of the participants were in the diverted group and half in the control non-diverted group (Steadman and Naples, 2005).

Outcomes from the study suggest that “jail diversion works” (p. 168) in reducing time spent in jail (diverted individuals spent an average of two months more in the community than their counterparts), public safety is not placed ‘at risk’ when individuals were diverted from arrest during this study as they had comparable re-arrest rates at the twelve month marker, Jail Diversion Programs link individuals with community based treatment (although it was not clear to what extent the treatment mitigated their symptoms) and jail diversion generally resulted in lower criminal justice costs and increased mental health costs (Steadman and Naples, 2005). This research is important in

that it establishes that jail diversion activities in the identified programs are successful at reducing arrests and time spent in jail. All pre-arrest diversion programs are predicated on the assumption that those who are diverted from arrest at the time of the police response will spend less time incarcerated than those who are not diverted, which is validated by this study. Despite the relatively large sample sizes, the study is potentially compromised by bias in the non-equivalent comparison group.

In a research study examining the effect of police training on the disposition of police officer's calls involving persons with mental illness, Teller et al. (2006) analyzed police dispatch logs for two years before, and four years after the implementation of a Crisis Intervention Team (CIT) program in Akron, Ohio. The CIT trained 27% of the Akron Police Department as CIT officers in 2000 (Teller et al., 2006. p. 231). Data were collected for the period May 1998 through April 2004. The research was designed to measure; monthly average rates of 'mental disturbance' calls compared with the overall rate of police calls; disposition of mental disturbance calls by time and training and the effects of techniques on voluntariness of disposition (p. 232). During the time period studied, the average number of 'mental' disturbance calls actually increased. The researchers attributed this volume increase to an enhanced awareness of signs and symptoms of the mentally ill by the call takers and a greater level of comfort within the Akron community about calling the police and identifying the nature of the problem as a 'mental disturbance issue' (Teller et al., 2006 p. 235).

The study found that compared with non-CIT officers, CIT officers were more likely to transport a person to a facility for psychiatric assessment; one of the desired outcomes of the CIT program. What was not desired or anticipated was the reported increase in rates of arrest of the mentally ill by the CIT officers (p. 236). Possible explanations for this increase included that CIT officers were being sent to the most challenging calls where their discretion was more limited; the offenses they encountered were more serious; and that arrest may have become more palatable for CIT officers given their knowledge of the availability of the Akron County court-based post-arrest Jail Diversion program (Teller et al., 2006).

While this research suggests that CIT training for police officers may increase awareness of signs and symptoms of mental illness and has facilitated treatment for those they encountered, it is not experimental in design and therefore

cannot claim causality between the CIT training and the subsequent disposition of police calls. Additional methodological concerns with this research exist. Police officers were not randomly assigned to CIT trainings but instead volunteered for CIT training, which suggests that they were potentially more sympathetic to the mentally ill and more likely to refer to treatment with or without the CIT training.

Case Study analysis of Pre-arrest Jail Diversion Programs

Lamb et al. (1995) assessed whether or not outreach teams of mental health professionals and police officers decriminalized the behaviors of the mentally ill (by diverting from arrest) and made appropriate referrals for mental health treatment in the communities that they served. The researchers reviewed the records of 101 consecutive referrals (September 13th 1993 to October 30th 1993) made to the Los Angeles Police Department System wide Mental Assessment Response Teams (SMART). The SMART team is comprised of police officers and mental health clinicians who jointly respond to community calls involving persons with a mentally illness. The researchers tested two hypotheses; that the SMART team would successfully evaluate and make appropriate dispositions for all “psychiatric emergencies in the field even for persons who are violent or potentially violent” (Lamb et al., 1995 p. 1268) and that if the SMART team evaluated mentally ill people in the field, “fewer would be inappropriately placed in the criminal justice system” (Lamb et al., 1995 p. 1268).

Chi-square analysis (with correction for continuity) was used to determine whether significant relationships existed between variables used in the study such as history of serious violence against other, arrest history, presence of psychopathology and history of psychiatric hospitalizations (Lamb et al., 1995). The study found that even in situations where the individuals with a mental illness encountered had a high propensity for violence and substance abuse, the SMART team members were able to divert these individuals to community-based mental health treatment rather than make an arrest. Only two percent of the 101 individuals referred to the team were arrested (Lamb et al., 1995, p. 1267). Concerns with this methodology include the lack of control group, the small sample size and the lack of generalizability of the outcomes.

In 1998, Deane et al. surveyed 194 urban police departments nationwide inquiring about specific strategies which they were using to assist them with their responses to individuals with a mental illness (Deane et al., 1998). The

results of this survey suggests that respondents (who indicated that they had adopted a specialized approach) had programming which conformed to one of three models; police-based specialized police response; police-based mental health response or mental-health-based specialized mental health teams. Based on these results, Borum et al. (1998) surveyed 452 police officers from three of the responding law enforcement agencies; Birmingham, Alabama who created a Community Service Officer team that included civilian officers with professional training in social work or mental health related fields who assisted police officers in emergency mental health calls.

Memphis, Tennessee responded to calls involving individuals with a mental illness using a Crisis Intervention Team of specially trained officers and Knoxville, Tennessee responded using mobile crisis units, two person teams of clinicians who responded to the scene of mental health emergency calls at the request of the police (Borum et al., 1998). This survey, and its results, provides a picture of what types of specialized mental-health response programming were being utilized in urban police departments across the US and established three major classifications of program construct. The researchers acknowledged that the typology only applies to urban communities given the target participants and that specialized responses in rural jurisdictions may differ completely.

Borum et al. (1998) conducted additional case-study evaluation of each of these three sites with a “single case design and multiple units of analysis” (Borum et al., 1998. p. 395). The main domains included on the questionnaires measured police officers’ perceptions of the effectiveness of the programs in their departments, perceptions of the helpfulness of the mental health system, and perceptions of the level of difficulty that the mentally ill pose for the department. Outcome data revealed that those surveyed generally reported that the mentally ill posed a “significant” problem for the department and that they felt well prepared to handle calls involving the mentally ill (p. 397). Officers from departments relying on mobile crisis units and on police-based social workers both rated their program as ‘moderately’ effective in all areas except for minimizing officer times on these calls whereas the Knoxville Mobile Crisis Unit scored significantly lower ratings than the other models (Borum et al., 1998). This research provides a good foundation from which to further explore support for, and confidence in, specialized response units for calls involving persons with a mental illness. It is unfortunately unable to provide us with comparative experiences from officers working in a non-specialized team police department.

In 2000, Steadman et al. compared these same three jail diversion programs (Community Service Officer team model in Birmingham AL, the CIT in Memphis and the Mobile Crisis Unit Knoxville, TN) to “determine how often specialized professionals responded and how often they were able to resolve cases without arrest” (Steadman et al., 2000, p. 645). Using a comparative cross-site descriptive design, they examined 100 police dispatch calls made between October 1996 and August 1997 at each of the three sites. Each case involved police officers being dispatched to respond to a call that may have involved an individual with a mental illness. From this call data, the researchers determined how many calls had resulted in a specialized police response. In addition, the researchers looked at an additional 300 cases (100 from each site) which resulted in a specialized police response to examine differences in the disposition of cases between the three programs (p. 646). Large differences were observed between the three sites on the number of calls which resulted in a specialized police response; Birmingham, 28%, Knoxville, 40% and Memphis, 95% (p. 645). The researchers attributed the highest rate in Memphis to the city’s no-refusal drop off evaluation center for the mentally ill in crisis.

All three programs had a relatively low arrest rate when a specialized response occurred; 13% for Birmingham, 5% for Knoxville and 2% for Memphis (p. 648). The researchers concluded that their data strongly suggested that collaborations between the mental health system and criminal justice system, (alongside efforts of the advocacy community and the availability of essential services) reduced the inappropriate use of arrest and jail for individuals with a mentally illness (Steadman et al., 2000). Although this study reveals how successful the jail diversion programs were at diverting individuals with a mental illness from arrest, it is limited by an inability to show what the ultimate outcome is for those individuals who were arrested, referred into treatment, or when the matter was resolved on scene by police. The findings are helpful for anchoring the debate about the efficacy of these three pre-arrest jail diversion programs and highlight the need for more rigorous evaluations of these three program models (Steadman et al., 2000, p. 648).

Survey Based Research Studies

In 1999, Hails and Borum developed a survey to administer to 135 police agencies (selected for having 300 or more sworn police officers) in the United States. A total of 84 agencies (62%) responded with “usable data” (Hails and

Borum, 2003, p. 55). The survey was designed to address two issues; the extent of recruit and in-service training focused on how to respond to people with mental illness and the existence of specialized responses to handle these calls. The study revealed that departments varied widely in the amount of training provided to officers on mental-health related topics; the average length was six hours at the Police Academy level and one hour of in-service annually. Almost one third of the departments had some form of specialized response programming in place; specifically, 21% had a special unit in-house and 8% had access to a mobile mental health team (p. 55). Agencies with no specialized response reported fewer police academy hours (mean of 7.62 hours) dedicated to responding to the mentally ill than did the agencies with a response team (mean of 11.7 hours) (Hails & Borum, 2003, p. 55). The researchers concluded that it is difficult to determine whether or not the training provided to police officers on mental health topics is retained or is considered adequate.

Although it is not clear whether the training is adequate, it is suggested that the time dedicated to these issues appears limited and falls short of the 16 hours recommended by the Police Executive Research Forum (PERF, p. 57). Some of the responding agencies provided little or no training on mental health topics (Hails & Borum, 2003) however 88% of the agencies reported providing some form of mental health training for their police officers. The outcomes of this study are interesting in that they create a snapshot of how much training police agencies across the United States are providing on mental health topics. However, the data are purely descriptive in nature and lack specificity regarding the content of the trainings provided by police agencies. The research provides no information about the impact of the trainings on the outcomes of calls involving the mentally ill in these communities, including injuries or police shootings. It is also noteworthy that the number of specialized responses available to police officer declined between the data gathered just two years prior. Possible explanations for this decline may be attributable to a difference in sampling frame, budget cuts to mental health and police agencies, and program closure due to lack of available data on their effectiveness (Hails & Borum, 2003, p. 57).

The review of literature revealed a need for more comprehensive and rigorous evaluation of Jail Diversion Programs. The evaluation studies that we do have focus on a handful of programs nationwide (Strauss et al., 2005, Broner et al., 2004, Borum et al., 1998, Steadman and Naples, 2005, Teller et al., 2006, Steadman et al., 2000, Lamb et al., 1995). Other studies have described the most common elements in program design and have contributed to the

creation of a typology of jail diversion programs currently in operation (Hails & Borum, 2003, Deane et al., 1999). This current study will build upon the existing literature and provide some insight into the impact of a co-responder Jail Diversion Program upon police officer attitudes toward individuals with a mental illness.

The impact of police training programs on attitudes toward the mentally ill

The review of the literature revealed an additional eight studies which have assessed police officers' attitudes toward the mentally ill. Only two studies to date have examined the impact of mental health training on police officers' attitudes toward the mentally ill. The training program most commonly examined in the literature is the Crisis Intervention Team (CIT). The CIT program originated in Memphis, Tennessee in 1988 and has been widely replicated across the country with varying degrees of program fidelity. The CIT model consists of 40 hours of specialized mental health training for a cadre of self-selected police officers who then become the primary first responders for calls involving the mentally ill. The original goal of the CIT program was to reduce officer and citizen injuries but, over time, the ability of the CIT officer to divert individuals with a mental illness from arrest has emerged as an equally important goal (Watson. et al., 2008).

Two research studies utilized surveys to assess police officers pre- and post-mental health trainings (Compton et al, 2006 and Pinfold, 2003). They found that officer attitudes toward and beliefs about the mentally ill improved after training. In 2006, Compton et al. administered a survey to 159 police officers in Georgia before and after CIT training. The Georgia study revealed that pre-CIT training, the participants agreed more strongly with statements that the average person with schizophrenia is more aggressive than someone who is not schizophrenic; that persons with schizophrenia are more likely to commit a violent crime and that respondents do not want an individual with schizophrenia living within two blocks of their home. After CIT training, the Georgia officers reported statistically significant differences in their post training responses and viewed the mentally ill as less aggressive than pre-test levels, were more supportive of treatment, displayed a greater understanding of schizophrenia and reported less desire for social distance than pre-CIT training (Comptom et al., 2006 p. 1200). The study does not evaluate the long term impact of the CIT training and results cannot be generalized.

In 2003, Pinfold et al. conducted a study comparing the pre- and post-test responses to a questionnaire administered to 109 English police officers who received four hours of training on the nature of “mental problems” and what police officers can do to support people with “mental problems” (p. 339). The questionnaire was designed to measure the police officer’s knowledge of, attitudes toward, and understanding of available behavioral interventions. Five key messages were delivered during the training, which corresponded to the five statements to which participants were asked to respond pre- and post-training; “we all have mental health needs”; “the mentally ill are no more violent than the general population”; “the mentally ill can recover”; “one in four people will have mental health problems over their life span” and “schizophrenia is not like having a split personality” (p. 340). Baseline (pre-test) data revealed that the scores ranged from 29% agreement with the last statement to 60% agreement with the first statement (Pinfold et al., 2003. p. 340).

Post-test scores revealed an increase in agreement with four of the five statements and included a significant increase in agreement with the last (67%) and first statement (80%) (Pinfold et al., 2003, p. 340). The researchers concluded that short educational interventions can produce overall changes in police officers’ reported attitudes toward persons with a mental illness. Limitations of the study include the small sample size, lack of comparison or control group and lack of long-term follow-up regarding attitudes. Additionally, there is no indication that the changes in attitudes were internalized or that they translated into different or improved behavior or action towards individuals with a mental illness.

Police officer’s attitudes toward the mentally ill

The following summarized articles represent the body of research conducted on police officer’s attitudes toward the mentally ill in police departments without the presence of a Jail Diversion Program or specialized training program.

In 2004, Cotton administered a survey to Canadian police officers (originally designed for the general population in Canada) in an attempt to determine whether police officers’ attitudes differed from those in the general population. In Cotton’s study, Canadian police officers with no specialized mental health training or preparation completed the Community Attitudes toward Mental Illness (CAMI) questionnaire. Originally developed by Taylor and Dear (1981) the questionnaire has been shown to be a valid and reliable tool for measuring attitudes toward the mentally ill.

Cotton gathered data from members of three Canadian police departments, Kingston City, Port Moody and Ontario Provincial Police Department. The average response rate was 34% and included 138 participants. Cotton found that while the officers surveyed were not opposed to their role in responding to the mentally ill, they requested additional training and felt that they needed extra support in order to perform in this role successfully. While they were generally benevolent toward the mentally ill, the police did show moderate disagreement with the positive items on the authoritarianism and social restrictiveness scales reflecting beliefs in the dangerousness of the mentally ill compared with others members of society, and the desire to keep a social distance from them (Taylor & Dear, 1981. p. 228).

Cotton also compared the outcomes for her data collection with the original participants from the 1981 Taylor and Dear study. The general population and the Canadian officers shared some similar attitudes toward the mentally ill; specifically, that the community should be more tolerant toward the mentally ill and that people with mental illness should not be kept separate from society (Cotton, 2004). The scores of the police officers (Cotton, 2004) and the original community sample (Taylor & Dear, 1981) on the four attitudinal domains (CAMI); the mean, standard deviation and Cronbach's alpha are displayed in Table 2.1.

Table 2.1 Police Officer Scores on CAMI and Cotton Scales

	Police Officers	Original Sample*
Authoritarianism	36.9 (3.6) (.60)	35.4 (.68)
Benevolence	20.8 (3.8) (.68)	22.5 (.76)
Social Restrictiveness	36.1 (4.6) (.76)	36.4 (.80)
Community Mental Health Ideology	26.5 (5.8) (.52)	24.2 (.88)

*"Standard deviations were not reported in the original Taylor and Dear (1981) study. Thus, only the means and alphas are reported here" (Cotton, 2004. p. 140).

In addition to Cotton's research, five additional studies have assessed police officers' attitudes toward the mentally ill (Litzke, 2005; Kimhi et al., 1998, Psarra et al., 2007, Ruiz et al., 2004, Watson et al., 2004). All of the research was conducted in police departments that did not have any specialized training or units to assist them with their calls involving individuals with a mental illness. Questionnaires were the most consistent choice of research design used in all of the studies (Litzke, 2005; Kimhi et al., 1998, Psarra et al., 2007, Ruiz et al., 2004 and Watson et al., 2004). Litzke (2005) conducted research with German police officers (n=105) and included a comparison group of civil servants (n=102) who were also administered the questionnaire. Psarra et al. (2007) surveyed 156 Greek police officers who had been involved in escorting the mentally ill to the local hospital emergency room for a psychiatric evaluation. Kimhi et al. (1998) administered their questionnaire to 93 Israeli police officers who worked within a psychiatric hospital's catchment area and were therefore likely frequently to encounter the mentally ill (Kimhi, 1998). Watson et al. (2004) and Ruiz et al. (2004) conducted their research with US police officers in Chicago and Pennsylvania, respectively.

The Chicago researchers surveyed 382 Chicago police officers about their perceptions and attitudes toward the mentally ill and the Pennsylvania researchers mailed surveys to 970 police departments with a response rate of 164 surveys returned (17%). The Chicago study concluded that the police officers viewed people with a mental illness as being less responsible for their situation, more worthy of help and more dangerous than persons without a mental illness (Watson et al, 2004). The majority of the Greek police officers (64.9%) reported that the mentally ill individuals whom they encountered were always violent or threatening violence, and that mentally ill individuals lack insight into their behaviors. In addition, these officers frequently requested more training for handling these types of calls (Psarra et al., 2007). Likewise in Israel, the majority of police officers surveyed (66%) reported that the mentally ill are more dangerous than their "healthy" counterparts (Kimhi et al., 1998) while in Pennsylvania, Ruiz et al. (2004) found that less than half (43%) of their respondents viewed the mentally ill as more dangerous than their non-mentally ill counterparts.

Litzke (2005) determined that the attitudes of German police officers and civil servants toward the mentally ill did not differ significantly except for in their desire for social distance. The police officers reported wanting a greater social distance from the mentally ill than the civil servant respondents. Generally, both groups felt more

'compassion' when encountering an individual with a mental illness as opposed to a 'healthy' person but police officers' scores were generally lower on that measure than the civil servants scores, possibly as a result of frequent and difficult encounters (Litzcke, 2005, p. 130). A theme which emerged in the literature regarding police officers' attitudes toward the mentally ill was that the mentally ill are perceived to be more violent and dangerous than non-mentally ill persons. International studies conducted in Greece, Germany, England and Israel found that the majority of police officers believed that the mentally ill were more violent and more dangerous than their counterparts in the general population (Pinfold et al., 2003, Psarra et al., 2007, Litzcke, 2005 and Kimhi et al., 1998).

While this literature review revealed that the majority of those surveyed believed that the mentally ill are more dangerous than their non-mentally ill counterparts, there are methodological concerns with the research cited. In the Greek study, those surveyed were not representative of the entire department and those who participated had relatively few years on the department and were the youngest officers. In addition, in the Greek and Israeli studies, (Psarra, 2007 and Kimhi, 1998) the researchers only surveyed police officers who had transported the mentally ill to a hospital for a psychiatric evaluation, which implies that they were in psychiatric crisis at the time of the event. These individuals represent only a subset of the population with a mental illness.

What is suggested from the limited research conducted is that there is a risk that police officers' perception of dangerousness prior to the arrival on the scene with a mentally ill individual could be a self-fulfilling prophecy. The research suggests that the perception of the mentally ill as more dangerous than the general population is common among officers both nationally and internationally. It is not hard to imagine how these perceptions could translate into police officers' lack of confidence in their ability to calmly resolve a situation involving an individual with a mental illness, and their tendency to resort to the speedy, possibly avoidable, use of force.

Patch and Arrigo (1999) conducted a literature review of 'police attitude' and 'use of discretion' research and examined the impact of police officers' perceptions about individuals with a mental illness on behavioral responses on the street. The researchers describe how police encounters with this population often fall into the category of "police-invoked order maintenance" calls, those in which officers feel the need to "quell or diffuse" socially disruptive situations e.g. disorderly conduct (p. 28). While these criminal infractions tend to be minor and

non-violent by nature, these types of scenarios are the ones in which individuals with a mental illness frequently encounter police as a result of their mental illness (Patch & Arrigo, 1999). Given that the majority of police departments in the US do not provide clear policies, training or preference to their officers regarding encounters with the mentally ill (Ainsworth, 1995), officers are often left to their own devices and rely on their discretion to resolve these types of order maintenance calls. Patch and Arrigo argue that these “police-invoked order maintenance” encounters have the greatest potential to be influenced by the officer’s personal attitudes, beliefs and assumptions. If police officers believe that the mentally ill are generally violent and non-compliant, their approach to the situation will be guided by these perceptions.

Additional research has examined the role that officer attitudes and perceptions can play in their behavior and responses toward the mentally ill they encounter. Ruiz (1993) surveyed 40 police departments in the US and Canada to determine what departmental procedures and dispatch codes existed for calls involving the mentally ill. Of the 40 departments, 28 responded with their departmental procedures and of those, only 11 included their dispatch codes (Ruiz, 1993). Additionally, Ruiz reviewed available police literature, case law, police procedure textbooks and sociological and psychological articles. A theme which ran throughout the department procedures involved the circumstances under which a confrontation between an individual with mental illness and a police officer occurs. Most commonly, departments viewed the reluctance (or inability) of an individual with mental illness to comply with the police officer’s demands, and a lack of understanding or empathy on the part of the officer, as a confrontation waiting to happen (Ruiz, 1993).

Dispatch data revealed that police calls for individuals experiencing a mental health crisis were often coded as the crime most commonly associated with that crisis e.g., disturbing the peace (Louisiana). Ruiz suggests that this coding prepares the responding officers for a criminal and not an individual in crisis. Conversely, in departments where codes were assigned to indicate that the call was of a psychiatric nature, they were often derogatory terms which heightened the responding officer’s caution e.g., Insane Case (Phoenix) or Mental Patient (Albuquerque). Ruiz recommends that verbal terminology associated with a call involving an individual with a mental illness should be revised and be separate from criminal codes and those associated with violence. Ruiz concludes that the “fear of personal injury, lack of understanding and empathy on the part of the police officer are probably the leading causes

for confrontation between the mentally ill and the police officers responding to calls involving them” (Ruiz, 1993, p. 159).

The connection between mental illness and violence is controversial and complex yet according to the research; mental illness and dangerousness appear to be closely correlated in the minds of the majority of police officers. A review of the literature on this subject was conducted and this researcher focused on the most recent studies for the purposes of this study. Historically, most of the studies focused on rates of violence among residents of psychiatric hospitals or rates of violence among those individuals with a mental illness who had been arrested, convicted and incarcerated for violent crimes. Shaw et al. (2006) conducted a national survey in England and Wales revealing that among those convicted of homicide, the lifetime risk of schizophrenia was five percent, a much higher prevalence rate than found in the general population, thereby suggesting a link between schizophrenia and homicide (Shaw et al., 2006). Studies such as this one, however, are inherently biased given that the subjects who are arrested, hospitalized or incarcerated are more likely to be violent and /or more acutely symptomatic ill than individuals with a mental illness in the general population.

The National Institute of Mental Health’s Epidemiologic Catchment Area (ECA) study of the 1980’s provide a less biased and arguably more accurate assessment of the risk of violence perpetrated by the mentally ill. The research was initiated in response to the 1977 report of the President's Commission on Mental Health. Its purpose was to collect data on the prevalence and incidence of mental disorders and on use of and need for services by the mentally ill (Robins & Regier, eds., 1991). The study examined the rates of mental disorders in five US cities (New Haven, Connecticut, Baltimore, Maryland, St. Louis, Missouri, Durham, North Carolina, and Los Angeles, California). Each site sampled over 3,000 community residents and 500 residents of institutions yielding 20,861 respondents overall using a diagnostic interview (NIMH Diagnostic Interview Schedule Version III). The longitudinal design incorporated two rounds of personal interviews administered one year apart with a brief telephone interview in between (Robins & Regier, eds., 1991).

Records of violence were found for 7,000 of the subjects (33%). Violence was defined as having used a weapon in a fight and having become involved in more than one fight which ended with an assault (Monahan & Steadman, eds.,

1996). The study revealed that patients with serious mental illness (defined as schizophrenia, major depression and bipolar disorder) were two to three times more likely as people without these illnesses to be assaultive. The lifetime prevalence of violence among people with serious mental illness was 16% as compared with 7% among people without a serious mental illness (Robins & Regier, eds., 1991). It is important to note that not all types of mental illness were associated with an increased propensity toward violent and assaultive behaviors. Anxiety disorders, for example, were not correlated with violence. Based on one year's data, the ECA estimated that the prevalence of serious mental illness (schizophrenia, major depression and bipolar disorder) for 18 to 54 years old in the general population is 8.3% (Robins & Regier, eds., 1991). Given that serious mental illness is a relatively rare occurrence, it arguably contributes very little to the overall rate of violence in the general population.

Despite this, the general perception of police officers appears to be that the individuals with a mental illness are more violent and dangerous than the rest of the population. As mentioned, this may be solely informed by their experience of encounters with individuals in acute psychiatric distress. Although police officers should always proceed with caution when approaching individuals in crisis, the literature suggests that they do not need to use extra caution with this population. Arguably, responding with a cautious yet empathetic approach may be more fruitful if the officer wishes to gain compliance and control of an individual with a mental illness.

The literature is clear that although Jail Diversion Programs have shown promise and are generally regarded as successful in diverting individuals away from the criminal justice system, their impact on officer's attitudes and beliefs have not been evaluated. That is the focus of this current research.

Chapter 3 Research Methodology

In this chapter the design and data collection process will be discussed. This study uses quantitative analysis methods, measuring and comparing attitudes towards individuals with a mental illness in four police departments in Massachusetts; the Framingham and Quincy Police Departments (treatment groups with Jail Diversion Programs) and the Lynn and Peabody Police Departments (comparison groups without a Jail Diversion Program). This study measures the attitudes of the police officers at a single point in time using a questionnaire modeled after the research of Taylor and Dear (1981).

Jail Diversion Programs

In 1999, the Council of State Governments (CSG) responded to calls for assistance from several states on how best to respond to the individuals with a mental illness who were coming into contact with the criminal justice system. In 1999, the CSG facilitated the first meeting of a small group of leading police and mental health policy makers from across the nation. Following this meeting a steering committee was created that developed and led an 18-month initiative with a wide range of stakeholder agencies (e.g., Police Executive Research Forum, the National Association of State Mental Health Directors) to develop policy and practice recommendations to improve the criminal justice response to individuals with a mental illness. The subsequent report produced by the Criminal Justice/Mental Health Consensus Project (2002) includes the result of dozens of days of meetings, surveys administered to governmental officials in 50 states, hundreds of hours of interviews with directors of innovative programs, and thousands of hours reviewing research, promising programs and legislation.

One of the initial findings of this Consensus Project report is that there is a direct link between inadequate community mental health services and the growing number of mentally ill who are incarcerated. There is consensus between front line law enforcement practitioners and mental health advocates that individuals with a mental illness come into contact with law enforcement as a result of the mental health system having failed. Furthermore, members of the project agree that if those individuals with a major mental illness actually received the services they needed, they would typically not find themselves charged with a crime, arrested or jailed (Consensus Project, 2002).

The Consensus Project Report recommends the development of partnerships between police departments and local mental health providers. In addition, policy statements recommend changes to increase the effective and efficient use of police resources. In 2002, the Framingham Police Department joined forces with a local mental health provider, Advocates Inc., to respond to the call for action in the Consensus Project report and the Framingham Jail Diversion Program was created. This program is designed to address and respond to police officers' concerns about calls involving individuals with a mentally illness in their community. Jail Diversion Program clinicians have been trained to assist the police in responding to calls involving the mentally ill first, by helping to deescalate the mentally ill who present in crisis and second, by providing assistance with respect to evaluation, referral and placement.

The Framingham Jail Diversion Program Model

The Framingham Jail Diversion Program is a pre-arrest, co-responder program that pairs mental health clinicians with Framingham Police officers to respond to calls in the community which involve an individual with a major mental illness or substance abuse problem. The primary goal of the program is to provide officers with an immediate treatment based alternative to arrest (e.g. psychiatric hospitalization) for individuals whom the police and clinician decide are in need of treatment.

The literature review revealed several factors that support the need for the co-responder pre-arrest model as utilized by the Framingham Jail Diversion Program. The most consistent finding from a survey administered to 300 police officers in Ohio is that they want rapid on site assistance from a qualified mental health clinician when responding to individuals with mental illness in the community (Lamb, Weinberger & DeCuir, 2002). Studies in NY and CA have shown that at least 30% of mentally ill patients seen in Emergency Departments were brought there by police officers (Lamb et al., 1995). In February 2003, members of the Advocates Psychiatric Emergency Services team (PES) a 24-hour psychiatric community-based intervention team based in Framingham, MA began orientation training for the Framingham Police Department in preparation for the launch of the Jail Diversion Program (JDP) which became operational in April 2003. All 120 members of the Framingham PD received the training which was 4 hours in length. The orientation training consisted of two sections: the first section provided an overview of the different categories of mental illness, common signs and symptoms, medications used to treat mental illness and de-

escalation techniques for first responders. The second section covered the genesis of the Jail Diversion Program, the operational aspects of the program, information on how to access the clinicians and scenarios under which the program clinicians could be helpful.

On April 1 2003, the Framingham Jail Diversion Program (JDP) commenced operations by placing a full time (40 hours a week) clinician in the police station to co-respond with police officers to calls for service and 911 calls involving the mentally ill. Over the seven years that the JDP has been in operation, the number of responding hours for clinicians at the station has increased to 60 hours per week and all department personnel have continued to receive at least annual in-service refresher training from clinical members of the JDP team. In addition to the formal in-service training offered, all new police recruits in the Framingham Police Department (FPD) are given a formal orientation to the JDP by program staff. While the JDP clinician primarily covers the 4pm-12am shift, back up clinicians at the Advocates Psychiatric Emergency Services (PES) offices are available for call out or phone consultation in the clinician's absence. Members of the FPD understand that when they transport the individuals with a mental illness to the Framingham Union Hospital Emergency Department (ED), they will be met by a member of the PES team.

The Framingham JDP collaborates with the Framingham Police Department in three ways. The first is the on-scene assessment provided by the in-house JDP Clinician, who is on the road during the shift on a ride along with a police officer and will co-respond to all calls involving the mentally ill. The second is through the annual in-service training program and orientation for new recruits and the third is through the monthly operations meeting in which members of the FPD (representatives from the patrol division, police administration and Chief's office) and the JDP (clinicians and program director) discuss the day-to-day program operations, difficult cases, and share relevant information.

In 2004, at the request of Advocates Inc., an evaluation of the Framingham JDP was conducted by Sylvia Perلمان of Dougherty Management Associates. This evaluation consisted of interviews with 23 stakeholders including state and local legislators, police officers and mental health workers involved in the program, SPSS analysis of program data and an analysis of cost data. The purpose of the evaluation was to make recommendations to the Advocates

JDP team regarding replication possibilities. The study found that the Framingham JDP program has brought about a “paradigm shift” for both police officers and mental health clinicians by signaling that they can be partners (Perlman, 2004, p. 4).

Program outcomes revealed that in its first year (2003) there were 212 jail diversion program responses with police officers to individuals in crisis. Of these 212, 109 individuals were engaged in criminal activity just prior or at the time of the response and a total of 80 of those potential arrests (primarily low level non-violent offenses) were diverted by the JDP team and referred into community based mental health treatment. The remaining 29 individuals were arrested by the police officers and represented those who had committed more serious or violent crimes (Perlman, 2004, p. 12). Because of the lack of data regarding how the Framingham Police had handled these situations before the JDP, Perlman was unable to make any definitive conclusions about what had changed. Perlman noted that the JDP program in Framingham appeared to be changing the outcomes for individuals with a mental illness who encounter the police and was meeting its goals of diverting individuals away from arrest and into community-based mental health treatment (Perlman, 2004).

The evaluations of jail diversion programs reveal some promising outcomes for members of the communities which they serve. There is very limited literature that examines the impact of police mental health training on police officers’ attitudes toward the mentally ill and there has been no examination of how police/mental health programs impact police officer’s attitudes towards the mentally ill. That is the focus of the present research.

Study Participants:

Treatment Group: The Framingham and Quincy Police Departments’ Dispatchers, Patrol Officers and members of the Detective Bureau were identified as the treatment group (n=227). These two communities were selected as both operate active pre-arrest police based Jail Diversion Programs in their police departments. It should be noted that the selection of these towns was not random as the researcher had direct involvement in the establishment of the Quincy JDP in spring 2008 and has an ongoing relationship with the Framingham JDP. Both Chief Carl (Framingham) and Chief Keenan (Quincy) responded positively to the researchers’ request that they participate in this study. The JDP clinician is physically present and available within the Framingham and Quincy police departments during the 4pm-

12am (evening) shift and many of the officers on the day and midnight shifts have also worked on the evening shift (patrol schedules are reassigned annually). Given that the Framingham Jail Diversion Program has been in existence for over 7 years and the Quincy Jail Diversion for almost 3 years, it is anticipated that most members of the Patrol Division and Detective Bureau have been exposed to the program. In addition to their exposure to the clinician on the shift, all of the Framingham dispatchers have received annual in-service training by members of the Jail Diversion Program, work directly with the JDP Clinicians and dispatch them to calls on the 4pm-12am shift. Most members of the Framingham and Quincy Police Detective Bureaus have been exposed to the JDP either as former patrol officers, during in-service training or on individual investigations for which they have requested JDP consultation.

Selection of the Comparison Sites

The selection of the comparison sites was a four step process; the treatment sites, Framingham and Quincy, both had JDP programs but had to be matched with communities who did not have a JDP program. Communities were considered to be a potential match if they did not have a JDP. We had knowledge of which communities in Massachusetts were operating jail diversion programs; Quincy, Framingham, Marlborough, Waltham, Watertown, Taunton, Lawrence and Milford. These communities were therefore eliminated from the comparison site search. The second step was to match the remaining non-JDP communities by total population. We obtained data about the JDP towns; Framingham has a population of 64,786.00 and Quincy, 95,061. After an exact match could not be made, criteria were established by the researcher that the matching communities' population had to be within 15,000 residents (higher or lower) of the JDP communities to be considered a possible matching community. Lynn has a population of 86,957 and was considered to be a potential match for Quincy whereas Peabody has a population of 51,846 and was considered to be a potential match for Framingham. The third step was to match the potential communities by the size of the police department and number of calls for service per year. To gather this information, the 2009 Annual Report of the Town of Framingham (JDP) and City of Lynn (non-JDP) communities were reviewed which described the police department personnel and annual number of calls for service (Table 3.1). This information was not readily available in this format for the communities of Peabody and Quincy. The researcher emailed the JDP liaisons at the Quincy and Peabody police department and requested the information. Table 3.2 shows that Framingham and Peabody have similar sized departments; 125 and 107 respectively. Quincy

and Lynn are more closely matched; 203 and 192 respectively. Calls for service data reveals that Framingham and Peabody are closely matched with 51,245 and 52,796 annual calls. Quincy and Lynn have the greatest disparity in annual call volume, 61,131 and 73,951 respectively. The final step in matching the communities was establishing that the police departments in the non-JDP communities were willing to participate and that they in fact respond to calls for service which involve individuals with a mental illness. The researcher contacted the research liaison in Lynn and explained that she was conducting research into police officer's attitudes towards the mentally ill. The researcher confirmed that the Lynn police officers frequently respond to calls involving the mentally ill and that access would be granted to the officers. Given some prior interest from the Lynn Police in the replication of the Framingham JDP model (an unsuccessful effort due to lack of funding) and their willingness to participate in the research, Lynn was chosen as a non-JDP match site for the Quincy JDP.

In order to assess the willingness of the Peabody Police to participate in the research, the researcher contacted Deputy Chief Carriere, explained that she was conducting research into police officer's attitudes towards individuals with a mental illness and asked whether the Peabody Police would participate in the study. The researcher also verified that Peabody Police officers frequently respond to calls for service involving individuals with a mental illness and that Peabody would be willing to participate in the study and Given the willingness of the Peabody Police Department to participate in the study and their previously discussed similarities to the Framingham Police Department, Peabody Massachusetts was selected as a match site for the Framingham JDP. The Lynn and Peabody Police Departments report that they have not had any additional training on working with the mentally ill beyond what was offered to them in the original police academies upon hire.

The Comparison Group

All members of the Lynn and Peabody Police Department Detective, Dispatch and Patrol divisions were selected for participation in this study as the comparison group n=187. It should be noted that Lynn is not an ideal comparison group given that they have a higher rate of poverty, lower rate of home ownership, and higher crime rates than Framingham (see Table 3.1). Both cities have the presence of ethnic diversity in their communities to varying degrees.

Table 3.1 Community Profiles for Peabody, Framingham, Quincy and Lynn, MA

Community Profile	Framingham	Quincy	Lynn	Peabody
Total Population	64,786	95,061	86,957	51,846
Percent Homeowners	55.5%	49.0%	45.6%	68.0%
Percent White	79.8%	72.0%	67.9%	91.0%
Percent Black	5.1%	4.0%	10.5%	2.0%
Percent Asian	5.3%	20.0%	6.4%	2.0%
Percent Latino	10.9%	4.0%	18.4%	5.0%
Percent below Poverty Level	8.0%	9.0%	16.5%	6.0%

Table 3.3 shows the Part 1 offences for the four communities for the year 2009. It is in this area that the four communities are the most different. Lynn is overwhelmingly more violent than the other three communities with 816 Violent Crimes in 2009. Quincy has 347 which is less than half of its site match, Lynn. Framingham and Peabody are more similar although Framingham has 52 more incidents of violent crime. It is possible that the high number of violent crimes in the City of Lynn will influence the attitudes of Lynn Police Officers and their responses to the questionnaire. Given the concerns about the use of Lynn as a control community, the researcher proceeded with caution and used ANCOVA analysis to ensure that Lynn does not deviate notably from the other communities.

Table 3.2 Police Department Characteristics in 2009

Department in 2009	Framingham	Quincy	Lynn	Peabody
Number of Police Officers	119	195	178	95
Number of Dispatchers	6	8	14	12
Number of Calls for Service	51,245	61,131	73,951	52,796

Table 3.3 Part 1 Offences for Framingham, Lynn, Quincy and Peabody Police Departments in 2009

2009 Crime Statistics*	Violent Crime	Murder	Forcible Rape	Robbery	Aggravated Assault	Property Crime	Burglary	Larceny Theft	Motor Vehicle Theft
Framingham	196	1	11	40	144	1,600	268	1,166	166
Quincy	347	2	15	105	105	1,872	598	1,139	135
Lynn	816	6	36	182	592	3,014	1133	1,408	473
Peabody	144	1	9	22	22	1,318	171	1,024	123

*FBI, Crime in the United States, 2009

The total number of potential participants in the research is 627 (all police department personnel). Administrators (rank of Lieutenant, Captain, Deputy Chief and Chief) in all four departments are not currently involved in responding to calls for service given their administrative roles and thus were not part of the studies target group. However, because patrol officers (sworn personnel) dispatchers (non-sworn civilian personnel) and detectives (sworn police officers) are the most likely to have had exposure to the JDP program, and have the most frequent contact with individuals with a mental illness, this subset of 438 were the target during survey distribution. Administrators were also permitted to participate but were not as strongly encouraged and questionnaires were not directly administered to this group. All four departments were willing to participate in the research project and provided the researcher permission to conduct the research within their departments including access to police officers at department roll call for the purposes of administering the questionnaire.

Institutional Review Board Approval

Prior to the administration of the questionnaire, this researcher requested the approval of the Northeastern University IRB for the research to commence. On January 8th 2010 the complete dissertation proposal, questionnaire, IRB application and an informed consent document were submitted for review by the IRB and approval for the study was given by the IRB on January 28th 2010. The research study was determined to present ‘no more than minimal risk’

to the participants and therefore the need for signed consent was waived. A set of introductory remarks for roll calls describing the research to be provided at roll calls were developed in conjunction with the IRB (see Appendix 1).

Hypotheses

It is hypothesized that members of police departments who have been exposed to jail diversion program clinicians (performing clinical interventions in the community alongside a police officer) experience different beliefs and attitudes about individuals with a mental illness than their non-JDP counterparts. As previously demonstrated by research into the impact of CIT training upon police officer's attitudes; there has been a measurable improvement in police officer's attitudes after CIT training. Given this shift in attitudes post CIT training, it seems reasonable to believe that following repeated exposures to clinician's interventions and observations of the mentally ill during these interventions, police officers exposed to a Jail Diversion Program will experience similar shifts in attitudes.

Research Question

Jail Diversion Programs are designed with the assumption that a number of persons with mental illness or substance abuse problems get arrested for behaviors stemming from these problems. The Framingham and Quincy Jail Diversion Programs also assume that by using a co-responder model (clinician and police officer respond jointly to the scene to intervene), the responding officer and mental health clinician can successfully prevent arrests and divert these persons to a community mental health facility for treatment. According to the Doherty report (Pearlman, 2004) the Framingham JDP has successfully met this goal. To date, there has been no evaluation of the efficacy of the Quincy Jail Diversion Program.

While there is some literature that examines the impact of the CIT model on police attitudes toward individuals with a mental illness, and a few international studies which examine police officer's attitudes toward them without any specialized programming in place, there has been no research conducted to determine if the presence of a co-responder pre-arrest program influences police officer's attitudes towards persons with a mental illness. To best address this gap in the literature, the research question that I seek to answer is:

Does the presence of a Jail Diversion Program influence Police Officers' Attitudes Toward the Mentally Ill?

Data Collection Tool

For this study the tool selected for data collection was the questionnaire. There are several reasons that this method was chosen. People have often taken questionnaires before both in their personal and professional lives so the method will seem familiar to the participants which may increase their willingness to participate. The questionnaire was processed through the Flesch-Kincaid grade level assessment. It scored as a 9th grade reading comprehension level which would reduce potential issues with reading comprehension and question ambiguity. The sample size for this study, $n=438$, is prohibitively large for efficient one-to-one interviews. The anonymity of the questionnaire approach should facilitate more candid responses from study participants.

The Study Questionnaire

The literature review revealed that a questionnaire had been previously developed by Taylor and Dear (1981) to measure the attitudes towards the mentally ill of members in a Canadian community. This questionnaire was also used in Cotton's study of Canadian Police Officer's attitudes towards the mentally ill (Cotton, 2004). This resource known as the CAMI questionnaire was adapted to fit the needs of this research.

The original Community Attitudes towards the Mentally Ill (CAMI) questionnaire measured attitudes on the following four attitudinal scales; Authoritarianism, Benevolence, Social Restrictiveness and Community Mental Health Ideology. These four domains, "focus on the most strongly evaluative dimensions and therefore best discriminate between those positively and negatively disposed towards the mentally ill and mental health facilities" (Taylor & Dear, 1981. p. 228). According to the authors, there are two related objectives of the CAMI scales:

- To determine and discriminate between those who accept and those who reject the mentally ill in the community.
- To develop scales to predict and explain community attitudes towards local facilities serving the needs of the mentally ill.

To test the reliability of each CAMI scale, Taylor & Dear (1981) calculated the Chronbach's alpha value for each scale and found the following;

Table 3.4 Chronbach's Alpha Values for CAMI Scales

CAMI Scale*	Alpha Value
Authoritarianism	0.68
Benevolence	0.76
Social Restrictiveness	0.80
Community Mental Health Ideology	0.88

*Taylor and Dear, 1981, p. 229

Given that a reliability coefficient of 0.70 or higher is considered acceptable in most social science research, the researcher is confident that the CAMI scales can be considered a reliable and valid data collection tool. The questionnaire for this research included all of the questions used in the CAMI study. CAMI scale questions ask the participants to respond to each of 40 statements using a Likert scales of five possible responses from strongly agree to strongly disagree. The CAMI questions include four scales of ten questions each. Five of the ten questions on each scale are designed to express a positive sentiment with reference to the underlying concept and the other five questions on each scale are designed to express a negative sentiment. The questions were sequenced in ten sets of four. Within each four question set, one question from each scale was represented. For the purposes of this study, the same sequencing will be used.

An additional 18 questions were added to the CAMI questionnaire. Twelve questions were developed as a means of gathering descriptive and demographic data for both qualitative and quantitative analysis for all participants (see Appendix 2 for non-JDP department Questionnaires). The remaining six questions were developed by Cotton (2004) who researched the attitudes of Canadian police officers towards the mentally ill. Cotton's questions specifically asked police officer's about, "their views of the current situation of the mentally ill in the community and the role that police have in their management" (Cotton, 2004, p. 139). An example of one of these statements is, "the mentally ill take up more than their fair share of police time." Cotton's questions have been added to this

questionnaire to better assess the attitudes of both JDP and non-JDP departments police officers about their roles and confidence in responding to individuals with a mentally illness.

In order to gather data for additional analysis about the impact of a Jail Diversion Program on police officers' attitudes, a separate set of eleven questions (questions 59-69) were asked of the Framingham and Quincy police participants. An example of one of these questions is, "have you used the JDP clinician to divert an individual from arrest and into mental health treatment?" (See Appendix 3 for JDP Department questionnaires).

Data Collection Method

The questionnaire was distributed in a group format at multiple roll call meetings at all four departments on all three shifts (Framingham, Quincy and Peabody at 8:00am, 4:00pm and 12:00am and Lynn at 9:00am, 5:00pm and 1:00 am). Each roll call was attended by between five-fourteen police officers. Given the police departments' schedules and rotations, several visits per department were necessary to reach all of the intended participants. In order to ensure maximum response rates and keep costs low, the survey was administered in person to allow for an explanation of the questionnaire and for consistency in data collection.

The participants were provided with a short verbal description of the research project (Appendix 1). At that time, any questions about the purpose of the study, requests for clarification of items on the questionnaire, and questions about the anonymity/confidentiality of respondents/responses could be answered. There were no questions asked about the questionnaire or the research process. An anticipated benefit of administering the questionnaire in person was that the response rate would be higher than that of a mailed or email distribution method. The questionnaires were distributed by hand and were accompanied by a consent form (see Appendix 4 for consent form) and a set of instructions for completion identical to those used in the original CAMI research. All of the instructions and consent forms were identical for the four sites. It was anticipated that the questionnaire would take approximately 15 minutes to complete and according to the feedback given, this appeared to hold true. The completion of the questionnaire did not appear to significantly impact the police officer's duties. Each department differed as to whether or not they allotted time in the roll call session to complete the questionnaire.

Table 3.5 Questionnaire Distribution by Department

Department	Roll Call Dates (3 per day)	Distributed at Roll Call	Additional Questionnaires Provided	Total
Framingham	4/27;4/28;4/29;4/30	65	20	85
Lynn	5/3;5/5;5/6	82	43	125
Peabody	5/2;5/3;5/5	53	25	78
Quincy	5/10;5/14;5/7	91	59	150
Total	39	291	147	438

In order to reduce any bias, given the researchers' affiliation with the Framingham and Quincy Jail Diversion Programs, after the instructions were given and the assurances of anonymity provided, the researcher left the room and asked that participants deposit their completed questionnaires in a sealed box for retrieval at a later time. The researcher provided each department with a sealed box with a slot for completed questionnaires to be deposited in. The box was left outside the roll call room in each department alongside additional copies of the questionnaire for administrators and police officers who were not present for roll call but wished to participate. Each box remained at the police department for ten days after the last roll call questionnaire administration and was collected by the researcher. Table 3.5 shows the dates of the questionnaire distribution, the total number administered in person and provided for police officers not present at roll call.

Dependent Variables

The CAMI scale questionnaire includes ten questions for each of four domains; five in the affirmative and five in the negative. The four CAMI domains are Authoritarianism, Benevolence, Social Restiveness and Community Mental Health Ideology. Once responses to the negative questions have been reversed, the 1-5 responses for all questions within each domain are averaged to calculate a summary score for each domain. A high score on any domain indicates a high level of endorsement of that principle while a low score represents disagreement with that principle.

The four domains are:

Authoritarianism: measures the perceived causes of mental illness, the need to hospitalize the mentally ill, the difference between the mentally ill and 'normal people' and the importance of custodial care.

Benevolence: measures the perceived responsibility of society to help the mentally ill.

Social Restrictiveness: measures the perceived dangerousness of the mentally ill, need for maintaining social distance and the level of responsibility that the mentally ill have for their behavior.

Community Mental Health Ideology: measures views regarding where the mentally ill should live, where their resources should be located, and the acceptance of mentally ill in community based settings.

Cottons' questions assess how police officers view the current status of the mentally ill in the community and the role which they have in their management. A 'strongly agree' (5) response indicates a positive attitude towards the mentally ill in the community and the role that the police play in managing them for three of the six questions, and for the remaining three questions, the reverse is true and those scores were reversed to make the scores comparable. One overall Cotton score was calculated by adding the responses to the six questions.

Independent Variables

Demographic variables collected include age, gender, years as a police officer, education and rank. Additional questions (developed by the researcher) were asked to measure the officers' history of interactions with the mentally ill in their community and include: Encountered a Violent Mentally Ill Individual, Used Force on a Mentally Ill Individual and Arrested Mentally Ill individual. Experience with the JDP program was assessed in Framingham and Quincy police departments and included whether or not the police officer had experience with the JDP Program, how much experience, and what they had used the JDP clinician for. Additional questions were concerned with how the officer viewed the JDP and whether or not they found the JDP clinician to be helpful.

Research Question

Does the presence of a Jail Diversion Program influence Police Officer's attitudes toward the mentally ill?

The following are six hypotheses which were tested in order to address the research question this study seeks to answer.

Research Hypothesis 1: Members of Police Departments with a Jail Diversion Program have a higher mean “Community Mental Health Ideology” scale score than members of Police Departments without a Jail Diversion Program.

Method of Analysis: A multiple regression model predicting CAMI scores on the “Community Mental Health Ideology” scales was estimated incorporating officer experiences and impressions of their community along with a JDP indicator variable. A t-test was performed to determine the significance of that indicator variable.

Research Hypothesis 2: Members of Police Departments with a Jail Diversion Program are more likely to support police involvement with the mentally ill than members of the Police Departments without a Jail Diversion Program.

Method of Analysis: A multiple regression model was run incorporating officer experiences and impressions of their community along with a JDP indicator variable. A t-test was run to determine the significance of that indicator variable.

The following three hypotheses assert that members of the police departments with exposure to a Jail Diversion Program clinician will demonstrate more tolerant attitudes towards the mentally ill than members of the police department who have not had direct exposure to Jail Diversion Program clinicians.

Research Hypothesis 3: Members of the Framingham and Quincy Police Departments who have utilized the services provided by their Jail Diversion Program in any capacity will have more tolerant scores on all four CAMI scales than their colleagues who have not utilized the services of the Jail Diversion Program.

Method of Analysis: A multiple regression model predicting each CAMI score was run using information on officer’s background and experience combined with an indicator for Jail Diversion Program utilization. For each of the four models, a t-test evaluated the significance of the Jail Diversion Program utilization indicator.

Research Hypothesis 4: Members of the Framingham and Quincy Police Departments who have used the Jail Diversion Program to divert individuals from arrest and into treatment will have more tolerant scores on all four CAMI scales.

Method of Analysis: A multiple regression model predicting each CAMI score was run using information on officer's background and experience combined with an indicator for use of the Jail Diversion Program to divert an individual from arrest. For each of the four models, a t-test evaluated the significance of the Jail Diversion Program arrest diversion indicator.

Research Hypothesis 5: Members of the Framingham and Quincy Police Departments who have participated in clinician ride-alongs with members of the Jail Diversion Program will have more tolerant scores on all four CAMI scales.

Method of Analysis: A multiple regression model predicting each CAMI score was run using information on officer's background and experience combined with an indicator for participation in the ride along component of the Jail Diversion Program. For each of the four models, a t-test evaluated the significance of the use of the Jail Diversion Program ride along indicator.

Research Hypothesis 6: Members of the Framingham and Quincy Police Departments who have had more experience being on calls with a Jail Diversion Program clinician will consider the Jail Diversion Program more valuable.

Method of Analysis: Confidence intervals for the percentage of officers who value the Jail Diversion Program at each level of Jail Diversion Program experience were computed and overlaps noted.

Response Rates

During the months of April and May 2010, the researcher visited several roll calls on all three shifts (day, evening and overnight) and requested that the officers present participate in this questionnaire. The officers were informed that the researcher was investigating attitudes toward individuals with a mental illness in several police departments across the Commonwealth. The total number of respondents from the four surveyed police departments was 270.

The overall response rate across all departments surveyed was 62%. Though lower than the 70% hoped for, this response rate is higher than that achieved in several research studies involving police officer samples (Riley & Hoffman, 1995; Maxfield & Babbie, 2009; Klockars, Kutnjak, & Haberfeld, 2004). Of all four departments, Framingham had the highest overall response rate (76%). The researcher anticipated that JDP departments

(Framingham and Quincy) would have higher response rates than non-JDP departments, but Peabody and Quincy have a very similar response rate (61%; 57% respectively) while Quincy (57%) has a JDP program and Peabody does not. Lynn's response rate (70%) was higher than both Peabody and Quincy; which could be explained by their reported interest in starting a JDP program or the frequency of the calls they respond to involving individuals with a mental illness.

Chapter 4 Data Analysis

During the summer of 2010, 438 questionnaires were distributed at four police departments in Massachusetts, two of which have a Jail Diversion Program (Framingham and Quincy) and two without (Lynn and Peabody). The total number of respondents is 270 which represent 62% of those surveyed. Observations during the questionnaire administration revealed that Quincy appeared to be the least responsive department with a response rate of 57%. Framingham had the highest response rate of 76%.

Respondent characteristics by department are displayed in Table 4.1. The mean age of all respondents is 41 years and there is little variation across departments in this regard. The JDP departments have a similar combined percentage of male respondents (92%) as the non-JDP departments (95%). The department with the lowest mean years of service is Peabody (14.03) while the highest is Lynn (15.75). These are both non JDP departments. Quincy, one of the JDP departments, had 48% percent of officers respond that they hold a Graduate degree (Master's degree or higher) and all four departments have similar percentages of officers who hold a Bachelor's degree. Quincy and Peabody had the highest percentage of patrol officers respond to this question (72%; 73% respectively). Framingham had the lowest number of responding officers identify as assigned to patrol and is the department with the highest number of ranking officer participants.

Table 4.1 reveals the officers' responses when asked to estimate the percentage of their community with a mental illness. While all four departments responded with higher than expected estimates, the communities with the largest estimated populations of individuals with a mental illness (Framingham-23%, Quincy-22% and Lynn-25%) were especially high given that the prevalence of individuals with a mental illness in the Massachusetts general population is estimated to be 3% (NAMI Matters of Fact, Massachusetts). Given the almost universal frequency with which the police encounter and respond to persons with a mental illness, as shown in Table 4.2, the argument could be made that this directly influences their estimation of the number of these individuals in their communities and have led to this biased perception.

Table 4.1 Characteristics of Respondents by Department

Numeric summary of the respondent characteristics by age, gender, highest level of education, percentage of individuals in the community with mental illness and whether or not they are a Patrolman.

Characteristics	JDP Departments		Non-JDP Departments	
	Framingham	Quincy	Lynn	Peabody
Sample Size	62	83	85	40
Mean Age	38.60	40.30	42.48	44.43
Percent Male	88%	95%	96%	94%
Mean Years as Officer	14.27	14.87	15.75	14.03
High School Degree	19%	6%	11%	12%
Associates Degree	17%	11%	19%	12%
Bachelor's Degree	40%	35%	34%	41%
Graduate Degree	24%	48%	36%	35%
Assigned to Patrol	58%	72%	71%	73%
Perceived MI Population	23%	22%	25%	18%

Officers in all four departments report having used force against the mentally ill with the highest percentages occurring in the communities with the largest populations. Lynn has the highest number of officers who report having arrested individuals with mental illness (93%) and Lynn officers unanimously reported that they have encountered a violent mentally ill person. The extremely high level of number of officers who report having responded to calls involving the mentally ill in all four communities further supports the need and appropriateness of this research and the selection of these communities for participation in this research. Establishing that the police in the participating departments encounter individuals with a mental illness and have experienced mentally ill individuals being violent (requiring arrest and sometimes force) underscores the rationale behind the development of co-responder Jail Diversion Programming.

Table 4.2 Officer encounters with individuals with a mental illness

Numeric summary of officer experience with the mentally ill (MI) by department. Encounters include whether they have ever responded to a mentally ill individual, used force against a mentally ill individual, arrested an individual with mental illness and encountered a mentally ill person being violent.

Experience with MI	JDP departments		Non-JDP departments	
	Framingham	Quincy	Lynn	Peabody
N	60	82	84	40
Ever Respond to MI	99%	99%	99%	100%
Used Force with MI	92%	95%	96%	84%
Ever Arrested MI	88%	86%	93%	73%
Encountered Violent MI	97%	98%	100%	98%

The study questionnaire includes an additional eleven questions of the officers who work within the departments with a Jail Diversion Program (Framingham and Quincy). These were designed to gather data about the officers' knowledge of and experiences with their JDP. Table 4.3 shows respondents responses to these questions about their experiences with the Jail Diversion Program and its clinicians. The vast majority of Framingham (85%) and majority of Quincy (51%) respondents report having used the JDP in some capacity. Framingham officers in general report higher usage of the JDP clinician than Quincy for activities such as diverting arrest, training, and assistance on police calls and report a higher participation rate in the ride along program. Given that Framingham's program has been operational for over twice as long as Quincy's these results are not surprising however it is notable that after 3 years of operation, members of the Quincy police department do not use aspects of their Jail Diversion Program as frequently as members of the Framingham police department.

Table 4.3 Officer Experiences with the Jail Diversion Program

Numeric summary of officer experiences with the JDP. Experiences include whether they have ever used the clinician, diverted the arrest of a mentally ill individuals, clinician ride-along, received training for the JDP clinician, called for on-scene assistance or used the JDP clinician to issue a Section 12 (involuntary) commitment.

JDP Experience	Framingham	Quincy
N	62	82
Used clinician	85%	51%
Diverted arrest	77%	49%
Ride along	59%	14%
Received training	81%	31%
Called for Assist	77%	42%
Section 12	88%	43%

Respondents were asked to complete 46 questions for the CAMI and Cotton scales. Table 4.4 presents the mean scores on these scales by department. In the JDP departments, Quincy has the highest mean scores on all four CAMI scales and Framingham has a slightly higher mean Cotton score. In the non JDP departments, Peabody has higher mean scores than Lynn on all four CAMI and Cotton scales. The table shows that on average, the officers in the JDP departments are slightly less authoritarian (2.66 versus 2.68); equally benevolent (3.52 versus 3.52), slightly more socially restrictive (2.74 versus 2.72) and slightly less community mental health oriented (2.81 versus 2.85) than officers in non JDP departments. Table 4.4 also shows that the JDP department officers are more accepting of the mentally ill in their communities and the role they play in managing them (average Cotton score 20.27 versus 19.33) than their non JDP counterparts.

Table 4.4 Mean Officer Scores on CAMI and Cotton Scales by Department

Numeric summary of the officers mean scores and standard deviation on the CAMI Authoritarianism, Benevolence, Community Mental Health and Cotton scales.

Department	N	Auth.		Benevolence		Social Restrictiveness		Community MH		Cotton Score	
		Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
JDP											
Fram	61	2.65	.404	3.50	.491	2.72	.576	2.75	.683	20.62	3.19
Quincy	82	2.67	.446	3.53	.523	2.75	.526	2.86	.679	20.01	3.54
Non JDP											
Lynn	85	2.62	.411	3.49	.499	2.65	.466	2.73	.674	19.15	3.45
Peabody	40	2.75	.376	3.55	.423	2.80	.561	2.97	.707	19.72	3.47

Statistical Analysis

Several statistical procedures were performed as appropriate and include ANCOVA, t-tests and multiple regression. Regression models were only performed if the hypothesis was supported with a p-value of less than 0.2 in a preliminary two-sample t-test.

Summary of Scales

The CAMI Authoritarianism scale measures the perceived causes of mental illness, the need to hospitalize the mentally ill, the difference between the mentally ill and ‘normal people’ and the importance of custodial care. The CAMI Benevolence scale measures the perceived responsibility of society to help the mentally ill. The CAMI Social Restrictiveness scale measures the perceived dangerousness of the mentally ill, need for maintaining social distance and the level of responsibility that the mentally ill have for their behavior. The CAMI Community Mental Health Ideology scale measures views regarding where the mentally ill should live, where their resources should be located, and the acceptance of mentally ill in community based settings. The Cotton questions assess how police officers view the current status of the mentally ill in the community and the role which they have in their management.

ANCOVA Analysis

Analysis of covariance (ANCOVA) is useful for examining the relationships between at least two quantitative variables and at least one categorical variable. Given that the cities of Framingham, Quincy, Lynn and Peabody were not assigned randomly and differ in their community characteristics, ANCOVA analysis was used to determine whether the characteristics of the town itself was having an impact on the outcomes of interest. The use of ANCOVA analysis is beneficial in that it provides a method to adjust for pre-existing differences among the four towns and may remove bias associated with the differences in community characteristics (Wildt and Ahtola, 1978).

Six ANCOVA models were established: one model for each of the four CAMI scales, and two for the Cotton questions mean score. These ANCOVA models included town along with participant characteristics such as age, rank, shift and gender. Also included in the models are officer experiences with the mentally ill and respondent estimates of the percentage of individuals with a mental illness residing in the community served. No significant town influences were detected for any of the CAMI scales. In the case of Cotton, town was significant but an additional ANCOVA model detected that this was the strong influence of the JDP program on the Cotton score more than the influence of the individual town (p-value 0.014) (see Appendix 5).

Regression Analysis

Regression analysis is a statistical tool used to investigate the relationships among variables. Regression was chosen as the primary method of analysis as it is well suited to study the relationship between a single dependent variable and one or more independent variables (e.g. age or education). In this study, regression models examine the association between independent variables related to officer background and experience with the dependent variables of interest in the stated research hypotheses (i.e. police officer attitudes towards the mentally ill). We assessed the statistical significance of the estimated relationships described in each regression model; that is, considered the degree of confidence that the observed relationship is reflective of the relationship in the broader population and not due to chance alone when this particular sample of officers was collected.

Regression Assumptions

There are several assumptions that must be met for multiple regression modeling to be valid. One assumption is that the error terms are normally distributed. A review of p-p plots of residuals compared to a normal distribution was reviewed for each model fit and in each case a reasonably straight line was observed. Regression analysis also assumes homoskedasticity and that there is a linear relationship between the independent and dependent variables. To check for these two assumptions, scatter plots of the fitted values versus the residual values were created and reviewed for each model fit and no evidence of curvature or inconsistent variance was seen. A final assumption of regression is that there is little or no multicollinearity, meaning correlation between the model's independent variables needs to be monitored and kept to a minimum. Prior to model fitting, a correlation matrix (see Appendix 6) for all planned continuous model inputs was created and reviewed which showed the variables 'years on force' and 'age' were highly correlated (.76). Because of this concern, years on force was removed from the regression analyses. Explicitly checking each of these regression assumptions was vital because if any did not hold, inferences based on the regression model results would be invalid.

Testing of Research Hypotheses

It was hypothesized (Hypothesis 1 and 2) that members of police departments with a Jail Diversion Program will have a higher mean Community Mental Health Ideology (CMHI) scale score (reflecting a stronger endorsement of this attitude) and are more likely to support police involvement with the mentally ill and their role in managing them than members of the police departments without a Jail Diversion Program (Cotton score). Table 4.5 reveals the mean score by department on the Community Mental Health Ideology scale as developed by Taylor and Dear (1981) and mean scores on the Cotton scale as developed by Cotton (2004). There were 263 respondents included in this model. Peabody has the highest mean CMHI score (2.97) and Lynn has the lowest (2.74). Both Quincy and Framingham (JDP departments) scored within that range (2.86; 2.75 respectively). While it was hypothesized that officers in JDP departments would exhibit greater acceptance of mentally ill in community based settings as evidenced by a higher CMHI score; the results do not support this hypothesis.

Table 4.5 Community Mental Health and Cotton Scores by Department

Numeric summary of the CAMI Community Mental Health (range 0 to 5), 5 indicates high degree of officer belief that the mentally ill should live and receive their treatment in the least restrictive environment and Cotton scores (range 0 to 30), where 30 indicates officer complete support for their of role in managing the mentally ill in their community.

Department	N	Community Mental Health		Cotton	
		Mean	SD	Mean	SD
JDP					
Framingham	61	2.75	0.683	20.62	3.199
Quincy	85	2.86	0.679	20.01	3.546
Non JDP					
Lynn	85	2.74	0.674	19.15	3.458
Peabody	40	2.97	0.707	19.72	3.478

Support of police involvement is measured by the mean score on Cotton scale. Table 4.5 shows the mean Cotton Score of respondents by department. The two JDP Departments, Framingham (20.62) and Quincy (20.01) have higher mean Cotton scores than the two non-JDP Departments, Lynn (19.15) and Peabody (19.72). Higher mean scores on the Cotton scale indicate a stronger endorsement of the presence of mentally ill individuals in the community and the role which police officers have in managing them.

The results of the t-test shown in Table 4.6 show that there is significant evidence to support the hypothesis that members of police departments with Jail Diversion Programs are more likely to support their involvement in the management of mentally ill individuals in the community ($p= 0.013$). The mean Cotton score for departments with a JDP is higher than departments without a JDP. The difference is almost one full point; 20.27 versus 19.33. This finding suggests that JDP department members are therefore more confident and comfortable with their role in the management of individuals with a mental illness in the community. This may be, in part, attributable to the presence of a JDP. Officers are not adequately trained to respond to complex psychiatric crises and it is plausible

Table 4.6. Comparison of Community Mental Health and Cotton Scores by JDP/Non JDP Department

Results of t-tests comparing mean CAMI CMHI and Cotton scores of officers in JDP and non JDP departments

	JDP						t	p-value
	Yes			No				
	N	Mean	SD	N	Mean	SD		
Community Mental Health	140	2.81	0.681	123	2.82	0.691	0.014	0.5055
Cotton	143	20.27	3.405	125	19.33	3.461	2.229	0.0135*

*p<0.05

that having a clinician at their side relieves the officer of the sole responsibility for determining the most appropriate outcome of the call thereby increasing their confidence. The availability of the JDP in Framingham and Quincy may also decrease the anxiety of the officer called to aid individuals with a mental illness thereby reducing the negativity associated with responding to these calls, resulting in a higher Cotton mean score.

Table 4.7 shows the results of regression analysis examining whether the presence of a JDP program significantly increases the Cotton score once the model is adjusted for police officer background and experiences. Terms include police officer estimates about the presence of individuals with a mental illness in the community, whether they have arrested an individual with a mental illness, whether force was used with the mentally ill, the respondent's age and whether they had ever encountered a violent mentally ill individual. Gender was not included because of the small number of female respondents. Years of service was excluded because it is highly correlated with age. This model shows that police officers who reported having used force against the mentally ill have a lower Cotton score (by about -1.592 points), though this difference does not quite meet statistical significance (p=0.08).

The Cotton score on average increases with each year of age by 0.050 points which suggests that the more seasoned officers have a more tolerant attitude towards the role that the police play in the lives of individuals with a mental illness. The officer's rank (patrolman versus superior officer) is seen to have a significant impact on their Cotton score (-1.599) suggesting that those who interact more regularly with individuals with a mental illness while on patrol have a less tolerant attitude towards them than the higher ranking officers who have more administrative

Table 4.7 Regression results of JDP with Cotton Mean Score

Results of the regression analysis examining the role of officer characteristics, experiences with the mentally ill and the presence of the JDP on their Cotton scale score.

Term	Coefficient	Std. Error
Intercept	21.005	2.818
Ever Respond	-0.923	2.450
Perceived MI Population	-0.022	0.012
Encountered Violent MI	1.175	1.842
Arrested MI	-0.295	0.720
Used Force	-1.592	0.928
Age	0.050	0.031
Education	-0.285	0.240
Patrolman	-1.599*	0.559
JDP Department	1.137*	0.456
N	263	
R ²	0.127	
F	3.34	

*p<0.05

responsibilities and therefore less face to face interaction. Though not significant, the impact of education on Cotton score (-0.285) is in a direction which was not anticipated. Variance Inflation Factors for all model terms were reviewed to double-check possible multicollinearity and were found to be at an acceptable level (see Appendix 7). This model shows that the presence of a JDP program increases the mean Cotton score by an average of 1.137 points and supports the hypothesis that the JDP is a significant factor in an individual's officer's Cotton score.

Table 4.8 displays the ANCOVA output when the model was adjusted for means on the Cotton scale scores. These are the means which we would expect to see if there were no differences on the covariate. The confidence interval for the overall adjusted means is 19.50-20.26. The JDP department intervals (19.85-21.02) are a little higher than the non JDP departments (18.65-19.96). Within the JDP departments, Framingham has a higher adjusted mean than Quincy but it is not statistically significant. Similarly, Peabody has a higher adjusted mean than Lynn (19.70 versus

Table 4.8 Adjusted Mean Cotton Scores by Department

Results of the adjusted means ANCOVA on the Cotton score by department and JDP versus non JDP.

	N	Mean	Adjusted Mean	Standard Error	95% Confidence Interval	
					Lower Bound	Upper Bound
Overall	217	19.84	19.93		19.50	20.36
JDP	120	20.27	20.44	0.297	19.85	21.02
Framingham	51	20.62	21.13		20.21	22.05
Quincy	69	20.01	19.94		19.16	20.71
Non-JDP	97	19.34	19.30	0.332	18.65	19.96
Peabody	22	19.72	19.70		18.30	21.09
Lynn	75	19.15	19.18		18.44	19.92

19.18) but again is not statistically significant. The difference in adjusted means on the Cotton scale for JDP versus non JDP departments is still significant at the 0.05 level (p-value .013).

Recognizing that not all officers in JDP departments utilize the program in the same way, additional analyses were performed to examine the scores on the CAMI scales by level of JDP experience. In Hypotheses 3, 4, 5, members of the Framingham and Quincy police departments who had more interaction and greater utilization of the JDP program were expected to have more tolerant scores on the CAMI scales.

Table 4.9 (a-d) shows the outcome of the t-tests comparing mean scores on all four CAMI scales by use of the JDP program and clinician. There are six different ways in which the respondents could categorize their use of the JDP program; ever used clinician, used clinician to divert from arrest, participated in a clinician ride along, received training from a JDP clinician, called the JDP clinician from the scene for assistance and used the clinician to issue a Section 12 (involuntary commitment). On the CAMI scale for Authoritarianism, the officers in JDP departments who had used the clinician in any capacity (2.59) and had received training from the JDP (2.60) had statistically significant lower mean scores than their counterparts who had not (2.62 and 2.73 respectively). A higher score on the CAMI Authoritarian scale indicates a more authoritarian attitude towards individuals with a mental illness. The difference in means was significant at the 0.05 level (p-value 0.005 for used clinician and p-value 0.043 for received training) therefore partially supporting the hypothesis.

Table 4.9a Comparison of mean scores on Authoritarianism Scale by JDP experience

Authoritarianism								
JDP Experience	Yes			No			t	p-value
	N	Mean	SD	N	Mean	SD		
Used clinician	89	2.59	0.399	46	2.79	0.464	2.62	.005*
Diverted arrest	79	2.63	0.431	51	2.69	0.426	-0.82	.401
Ride along	40	2.61	0.451	87	2.66	0.402	-0.65	.285
Received training	71	2.60	0.429	67	2.73	0.422	1.73	.043*
Called for Assist	74	2.62	0.417	57	2.69	0.429	1.03	.152
Section 12	80	2.61	0.416	50	2.72	0.434	1.40	.082

*p<0.05

Table 4.9b shows the mean scores of officers on the six levels of JDP experience. On the CAMI Benevolence scale, officers who had used the clinician in any capacity had a higher mean score (3.59) than their counterparts who had not (3.43). A higher score on the CAMI Benevolence scale represents more benevolent attitudes towards the mentally ill. The higher score on this scale for the officers who had used the clinician was significant at the 0.05 level (p-value 0.047) which partially supports the hypothesis. Mean scores of officers on the CAMI Community Mental Health scale by the six JDP experiences are shown on Table 4.9c. A high score on this scale represents a greater tolerance of the mentally ill in the community. The mean scores were very similar across groups regardless of whether or not they had used the clinician and none of the differences in means were statistically significant at the 0.05 level.

Table 4.9b Comparison of mean scores on Benevolence Scale by JDP experience

Benevolence								
JDP Experience	Yes			No			t	p-value
	N	Mean	SD	N	Mean	SD		
Used clinician	88	3.59	0.053	47	3.43	0.077	1.69	0.047*
Diverted arrest	79	3.54	0.493	51	3.52	0.504	0.25	0.401
Ride along	40	3.60	0.516	87	3.52	0.486	0.87	0.192
Received training	71	3.53	0.492	67	3.52	0.535	-0.08	0.468
Called for Assist	74	3.46	0.487	57	3.61	0.512	1.60	0.944
Section 12	80	3.54	0.496	50	3.47	0.490	-0.77	0.222

*p<0.05

Table 4.9c Comparison of mean scores on Community Mental Health Scale by JDP experience

Community Mental Health								
JDP Experience	Yes			No			t	p-value
	N	Mean	SD	N	Mean	SD		
Used clinician	89	2.82	0.075	46	2.83	0.096	-0.06	0.522
Diverted arrest	79	2.80	0.681	51	2.86	0.680	-0.51	0.694
Ride along	41	2.78	0.758	86	2.84	0.640	-0.48	0.318
Received training	71	2.80	0.735	67	2.86	0.618	0.51	0.304
Called for Assist	74	2.75	0.706	57	2.91	0.648	1.37	0.913
Section 12	80	2.81	0.707	50	2.81	0.649	-0.00	0.502

JDP experience levels on the CAMI Social Restrictiveness Scale are shown on Table 4.9d. A high score on this scale indicates more socially restrictive attitudes towards the mentally ill. The officers who had used the clinician had a mean score of 2.68 and their counterparts who had not used the JDP clinician had a mean score of 2.82 which is higher and therefore noteworthy but not statistically significant at the 0.05 level (p-value 0.076) and the hypothesis was thus not supported.

Table 4.9.d Comparison of Mean Scores on Social Restrictiveness Scale by JDP experience

Social Restrictiveness								
JDP Experience	Yes			No			t	p-value
	N	Mean	SD	N	Mean	SD		
Used clinician	89	2.68	0.057	47	2.82	.074	-1.44	0.076
Diverted arrest	81	2.73	0.511	50	2.71	0.506	0.23	0.591
Ride along	41	2.79	0.557	87	2.69	0.494	1.01	0.157
Received training	72	2.72	0.590	67	2.75	0.451	0.40	0.346
Called for Assist	75	2.74	0.474	57	2.74	0.563	-0.02	0.508
Section 12	81	2.70	0.543	50	2.80	0.489	1.04	0.151

Table 4.10 reveals the regression results on the scores of officers in JDP departments who reported having used the JDP clinician for training, assistance on calls and for a Section 12 (involuntary commitment) on the CAMI Authoritarian scale. Officers who report having received training from the JDP program have a higher CAMI Authoritarianism score than their counterparts (0.022 points on average) but this is not statistically significant ($p=0.803$). Officers who report that they have called for the JDP clinician or used them for a Section 12 commitment have lower Authoritarianism scores than their counterparts (0.064 and 0.111 point on average lower respectively). Although this is in the direction hypothesized, the differences are not statistically significant (0.433 and 0.186) and therefore the hypothesis is not supported.

The rank of Patrolman has a significant impact on the Authoritarian mean score of officers regardless of which level of JDP experience is factored in. Table 4.10 also shows that the Patrolman in JDP departments have a significantly higher mean score than higher ranking officers on the CAMI Authoritarianism scale on all three models. Model 1 demonstrates that officers with the rank of Patrolman have a higher mean score than ranking superiors (.022 average points higher) which is statistically significant (p-value .001). Likewise, in Model II and III Patrolman have higher mean scores than their ranking superiors on the Authoritarianism scales (an average of .325 and .319 higher respectively). These are both statistically significant (.001 and .002 respectively). This may be understood in the context discussed earlier; police officers who respond to individuals with a mental illness may be frustrated by a lack of resources and even with the presence and availability of the JDP program to assist them, still have attitudes which are less tolerant and more authoritarian. None of the other officer characteristics or experiences with individuals with a mental illness has a significant impact on the CAMI Authoritarian mean scores in these regression models.

Table 4.10 Regression Models for CAMI Authoritarian Mean Score by Officer Characteristics, Experiences with Individuals with a Mental Illness and JDP Experience Levels; Received Training from JDP, Called for JDP Assistance and Used Clinician for Section 12.

	Model I		Model II		Model III	
	Coef.	Std. Error	Coef.	Std. Error	Coef.	Std. Error
Intercept	2.838	.464	2.962	.456	3.092	.469
Ever Respond to MI	-0.866	.538	-0.772	.519	-0.882	.521
Perceived MI Population	0.000	.002	-0.001	.002	-0.001	.002
Encountered Violent MI	0.238	.325	0.226	.321	0.256	.322
Arrested MI	0.072	.122	0.120	.126	0.115	.125
Used Force with MI	0.011	.173	-0.012	.170	-0.004	.170
Age	0.001	.005	-0.001	.005	-0.001	.006
Education	0.019	.044	0.001	.043	-0.013	.043
Patrolman	0.395*	.109	0.325*	.100	0.319*	.101
Received Training from JDP	0.022	.087				
Called for JDP Assistance			-0.064	.082		
Used JDP for Section 12					-0.111	.083
N		138		131		130
R ²		.150		.147		.161
F		2.116		1.998		2.199

*p<0.05

Table 4.11 shows the regression results on the scores of officers in JDP departments who reported having used the JDP clinician for a Section 12 (involuntary commitment) and participated in JDP clinician ride alongs on the CAMI Benevolence and Social Restrictiveness scales. Officers who have participated in a JDP ride along have a more benevolent score than their counterparts (an average of 0.097 points higher) but this is not statistically significant (0.318) and therefore the hypothesis is not supported. Officers who have participated in a ride along have a higher mean score on the CAMI Social Restrictiveness scale (0.053) but again, this is not statistically significant (.615). Officers who have used the JDP clinician for a Section 12 commitment have a lower mean score on the Social Restrictiveness scale (an average of 0.188 lower) than their counterparts which has a p-value of 0.068. Although this is close, it is not statistically significant at the 0.05 level and therefore the hypothesis is not supported.

Table 4.11 Regression Models for CAMI Benevolence and Social Restrictiveness Mean Scores by Officer Characteristics, Experiences with Individuals with a Mental Illness and JDP Experience Levels; Used Clinician for Section 12 and Participated in JDP Ride Along.

	Benevolence		Social Restrictiveness			
	Model IV		Model V		Model VI	
	Coef.	Std. Error	Coef.	Std. Error	Coef.	Std. Error
Intercept	3.873	.517	2.663	.561	2.893	.578
Ever Respond to MI	-0.574	.586	0.401	.637	0.210	.645
Perceived MI Population Encountered	0.000	.003	0.001	.003	0.001	.003
Violent MI	0.116	.361	-0.359	.392	-0.257	.399
Arrested MI with MI	-0.189	.142	0.240	.154	0.276	.154
Used Force with MI	-0.074	.192	0.104	.209	0.106	.210
Age	0.010	.006	-0.009	.007	-0.008	.007
Education	0.034	.048	-0.028	.052	-0.057	.053
Patrolman	-0.121	.113	0.081	.122	0.076	.124
Ride Along with JDP	0.097	.097	0.053	.105		
Used JDP for Section 12					-0.188	.102
N	127		128		131	
R ²	.102		.078		.105	
F	1.306		0.981		1.364	

*p<0.05

None of the other officer characteristics or experiences with individuals with a mental illness have a significant impact on the CAMI Benevolence and Social Restrictiveness mean scores in these regression models.

Regression results on the mean scores of officers in JDP departments who reported having used the JDP clinician in any capacity on the CAMI Authoritarian, Benevolence and Social Restrictiveness scales are displayed in Table 4.12. As hypothesized, this level of JDP experience positively impacted officer scores on these scales. Those officers who report having ever used the JDP clinician have Authoritarian scores 0.214 points lower on average than their counterparts (p-value 0.012) which is statistically significant. Additionally, these officers have Social Restrictiveness scores 0.205 lower than their counterparts (p-value 0.049) which is also statistically significant. The

scores on the Benevolence scale of officers who have ever used the JDP clinician is 0.163 higher (p-value 0.091) than those who have not used the clinician but this difference in means is not statistically significant. These findings suggest that officers who have used the JDP clinician have less authoritarian attitudes towards individuals with a mental illness, share the attitude that individuals with a mental illness should live and receive their treatment in the community and are generally more benevolent and understanding of these individuals. Given that the majority (85%-Framingham and 51%-Quincy) of police officers report having used the clinician in any capacity, this finding supports the hypothesis that officers who use the JDP clinician to assist them in their responses to individuals with a mental illness will share more tolerant attitudes towards them.

Also noteworthy in Table 4.12 are the statistically significant higher scores on the Authoritarianism scale for officers who reported that they have responded to individuals with a mental illness and for those of the rank of Patrolman. Those officers who have responded to individuals with a mental illness have a statistically significant lower Authoritarianism mean score than their counterparts (an average of 1.031 points lower). The overwhelming majority of police officers in both JDP departments report that they have responded to individuals with a mental illness (99% in both JDP departments) which suggests that almost all officers in both Framingham and Quincy share a lower Authoritarianism score regardless of whether or not they have used the clinician.

Officers with the rank of Patrolman have a statistically significantly higher score on the Authoritarianism scale than officers of higher ranks (an average of 0.342 points higher). Patrolmen are frequently called upon to respond to individuals with a mental illness and have more face to face contact than their ranking superior officers. These frequent and repeat contacts may increase the likelihood that the officers become more frustrated and cynical about these individuals and for those who do not use the JDP and have the rank of a Patrolman, may lead to a more authoritarian attitude.

Table 4.12 Regression Model for CAMI Authoritarianism, Benevolence and Social Restrictiveness by Officer Characteristics, Experiences with Individuals with a Mental Illness and by JDP Experience Level Ever Used Clinician.

	Authoritarianism		Benevolence		Social Restrictiveness	
	Coef.	Std. Error	Coef.	Std. Error	Coef.	Std. Error
Intercept	3.147	.463	3.809	.531	2.899	.573
Ever Respond to MI	-1.031*	.520	-0.348	.595	0.168	.645
Perceived MI Population Encountered	-0.002	.002	0.000	.003	0.000	.003
Violent MI	0.303	.320	0.061	.366	-0.248	.397
Arrested MI	0.133	.124	-0.196	.142	0.279	.153
Used Force with MI	0.028	.170	-0.090	.194	0.143	.210
Age	0.000	.005	0.007	.006	-0.008	.007
Education	0.000	.042	0.025	.048	-0.040	.052
Patrolman	0.342*	.097	-0.164	.111	0.083	.120
Ever Used Clinician	-0.214*	.084	0.163	.096	-0.205*	.103
N		135		135		136
R ²		0.201		0.116		0.106
F		2.958		1.548		1.424

*p<0.05

On the Benevolence scale, the officers who have used the JDP clinician have a higher mean score than those who do not (0.163 point higher on average). Although this is not statistically significant (p-value of 0.091) it is close and therefore is worth noting. There are no other statistically significant results to report on the Benevolence scale and the hypothesis was not supported. On the Social Restrictiveness scale, those officers who have used the JDP clinician have a statistically significant lower mean score than their counterparts (0.205 lower on average). This further supports the hypothesis that officers who have used the JDP clinician will have less restrictive attitudes towards the mentally ill and will be more tolerant of their proximity in the community. None of the other officer characteristics or experiences with individuals with a mental illness has a significant impact on the CAMI Authoritarian, Benevolence and Social Restrictiveness mean scores in these regression models.

Table 4.13 Officer Satisfaction with the JDP by Department.

Department	Valuable resource	
	No	Yes
Framingham	4 (6.9%)	54 (93.1%)
Quincy	13(17.3%)	62 (82.7%)

Hypothesis 6 asserts that members of the Framingham and Quincy police departments who have had more experience being on calls with a JDP clinician consider the Jail Diversion Program more valuable. Table 4.13 shows the overall satisfaction of the JDP in Framingham and Quincy. Only 6.9% of Framingham respondents and 17.3% of Quincy respondents do not find the JDP to be a valuable resource. The majority of respondents from both departments find the JDP to be valuable.

In addition to the general satisfaction question, officers in both JDP departments were asked about their individual familiarity and usage of the program. Table 4.14 shows the rates of officer satisfaction with their JDP by level of experience. This table includes 95% confidence intervals for satisfaction rates. Because many observed satisfaction rates are near 100%, these confidence intervals were completed using the Agresti-Coul method.

Of those officers who responded that they were familiar with the services of the JDP program, 89.74% found it useful. This strongly suggests that those who were more familiar with the services of the JDP program had a significantly higher rate of thinking that the program was useful. Those 16 individuals who were not familiar with the services offered by the program still found it useful 68.75% of the time. This also demonstrates a level of support for the program and its' usefulness even if the individual officers did not have familiarity with the services offered, it appears that they still support the existence and presence of the JDP in their department. Of the 71 officers who responded that they had received training, 92.96% found the program to be useful compared to only 80.65% of those who had not received training. Based on a two-tailed z-test for difference in proportions, the difference in these rates is statistically significant at the 0.05 level (with a p-value of 0.017).

Table 4.14 Officer Satisfaction with JDP by Level of JDP Experience

JDP Experience	Yes				No				p-value
	N	Proportion think JDP useful	95% CI Lower Bound	95% CI Upper Bound	N	Proportion think JDP useful	95% CI Lower Bound	95% CI Upper Bound	
Familiar with JDP	117	90%	82%	94%	16	69%	38.9%	82%	0.009*
Have received training	71	93%	83%	96%	62	81%	67.3%	88%	0.017*
Have used the JDP clinician	90	97%	89%	99%	43	67%	50.3%	78%	<0.001*
JDP ride along	41	95%	80%	98%	87	83%	72.2%	89%	0.027*
Have called for clinician	76	96%	87%	98%	55	75%	59.8%	83%	<0.001*
Used JDP to divert	80	99%	91%	100%	50	68%	52.2%	78%	<0.001*
Used clinician for Section 12	82	98%	90%	99%	49	69%	53.4%	79%	<0.001*

The finding that the vast majority of officers who have received training from members of the JDP also see value in the program is not surprising. The fact that roughly 80% who have not received training also find the program useful further endorses the impression that police officers in JDP departments strongly support the program even if they do not participate themselves in the services that it offers. Although not assessed directly, this outcome may support the frequently cited desire of police officers for more training on responding to individuals with a mental illness (Pasarra, 2007 Consensus Project, 2002; Cotton, 2004).

Police officers who have used their JDP clinician in any capacity overwhelmingly consider the JDP to be a valuable resource. A full 96% of these officers indicated that they believe in the value of their JDP compared to only 67% who had never taken advantage of the JDP clinician's services. With a p-value of <0.001, this difference is highly significant. This finding lends further support for the supposition that those who use the services of the clinician will

find the program the most useful and suggests that police officer's would like the JDP program if there were to use it. An increase of outreach efforts to officer's that have not availed themselves of the JDP services may be indicated

Of those police officers who responded that they had participated in a clinician ride-along, 95% found the program useful while 82% of officers who responded that they had not participated in a ride-along found the program to be useful (significant difference with a p-value of 0.027) as seen in table 4.14. This finding helps support the growing impression that police officers in JDP departments greatly value the program even if they have not individually used all the services which the program offers. Police officer support for the JDP amongst those officers who called for the JDP clinician themselves to assist with a response to an individual with a mental illness was 96%. Officers who responded that they had not called for the JDP clinician also found the program useful but to a lesser degree (74%) than those who had (significant difference with a p-value of <0.001).

Additional questions were asked than concern two specific services which the JDP clinician offers; the ability to divert an arrest and the ability to issue a Section 12 (a temporary involuntary commitment order). Of interest was how the use of these services related to officer endorsement of the program's usefulness. Given that these JDP's were established with the primary goal of diverting individuals with a mental illness away from arrest and into treatment, this diversion question is of particular interest. Of the 80 police officers who have used the JDP clinician to divert an arrest, 99% of them find the program useful while the 68% who responded that they had not used the clinician to divert an arrest, found the program to be useful a highly significant difference with a p-value of <0.001). This outcome demonstrates overwhelming support for the program amongst those officers who have chosen to divert individuals with a mental illness away from the criminal justice system and into treatment and further underscores the perceived value of diversion activity.

The issuance of a Section 12 (involuntary commitment) is another service which the JDP program clinicians offer the police departments in which they operate. Although police officers have the statutory power to issue these orders themselves, both Framingham and Quincy Police department administrators discourage this practice and this usually falls on the JDP clinician to initiate. Police officers who used the clinician to issue a Section 12 were asked whether they found the program to be useful and 98% of the respondents responded that they did while 69% of those who

responded that they not used the clinician in this way still found the program to be useful (a highly significant difference with a p-value of <0.001).

Summary of Quantitative Findings

This study investigates the attitudes of police officers in four departments in Massachusetts; Framingham, Quincy, Lynn and Peabody. Officer attitudes were assessed using a questionnaire that incorporated material developed and validated by other researchers in the field. The CAMI scales were developed by Taylor and Dear for their study of members of a community in Toronto in 1978 and additional exploratory questions from Cotton's 2004 research with Canadian police officers were also adopted. In total, 270 police officers from four police departments completed the questionnaire over the summer of 2010.

In Hypothesis 1, it was hypothesized that members of departments with a JDP would have a higher mean CMHI score than members of departments who do not. The Community Mental Health Ideology (CMHI) score on the CAMI scale measures views regarding where the mentally ill should live, where their resources should be located and the acceptance of individuals with a mental illness living in community based settings. This hypothesis was not supported and the mean scores of the JDP departments and non-JDP departments were almost identical. The mean scores show officers in both JDP and non-JDP departments have a moderate acceptance of the presence of the mentally ill in their respective communities regardless of the presence of a Jail Diversion Program.

In Hypothesis 2, it was hypothesized that members of departments with a JDP are more likely to support involvement with the mentally ill and feel more confident in responding to them than those without a JDP. Support of police involvement is measured by the mean response to the Cotton questions. Framingham and Quincy Police officers, who serve in JDP departments, responded with higher mean scores on the Cotton scales than members of the non-JDP Peabody and Lynn Police Departments. Additional testing of the hypothesis revealed that even when adjusted for police officer background and experiences, officer within JDP departments were more likely to support their involvement with individuals with a mental illness, and their role in managing their care, than officers within non-JDP departments. This may be attributable to the increased confidence that the JDP clinicians' presence provides the individuals officers on calls involving individuals with a mental illness.

Additional research hypotheses (3, 4, and 5) focused on users versus non-users of available JDP services rather than on comparing officers in departments with and without these supports.

Hypothesis 3 predicts that members of the Framingham and Quincy Police Departments who have used the services of clinicians will have more tolerant scores on all four CAMI scales than their colleagues who have not used the JDP clinician. The only scales on which this hypothesis was supported were the Authoritarian and Social Restrictiveness scales. The Authoritarian Scale measures the perceived causes of mental illness, the need to hospitalize the mentally ill, the difference between the mentally ill and 'normal people' and the importance of custodial care. A lower mean score on this scale was expected and found in officers who had used the services of the JDP clinician as this would be evidence of a less authoritarian attitude. The hypothesis was also supported on the Social Restrictiveness scale which suggests that officers who have used the clinician have a more inclusive view of persons with a mental illness and their proximity in the community. Hypothesis 3 was not supported for the Benevolence or CMHI Scales.

Hypothesis 4 asserts that members of the Framingham and Quincy Police Departments who have used the JDP clinicians to divert individuals with a mental illness from arrest will have more tolerant scores on all four CAMI scales than those who have not diverted. This hypothesis was not supported in the research findings. Results revealed that the scores on all four of the CAMI scales were quite similar for the two groups of officers. Given that the Benevolence scores were high in both groups, a possible explanation for the similarities in these scores is that the presence of the JDP program in these departments influences the police officers attitudes whether they use the services of the clinician or not.

In Hypothesis 5, it was predicted that members of departments with JDP who have participated in clinician ride alongs would have more tolerant scores on all 4 CAMI scales than their colleagues who have not. The scores on all four of the CAMI scales were not significantly different between these two groups of officers. Though not statistically significant, the findings on the Social Restrictiveness and CMHI Ideology scales were the reverse of what was anticipated in Hypothesis 5. The Social Restrictiveness and CMHI scales both concern attitudes about the presence of individuals with a mental illness in the community and the perceived level of dangerousness they present with. One possible explanation for this finding would be that the police officers who strongly supported

these perspectives but participated in the ride along program found that the mental health outcomes were more effective than the traditional arrest response and were therefore more apt to utilize the clinician on these calls. Simply stated, the police officer who wishes to contain and mitigate risk may actually take the JDP clinician on a ride along to effect a greater, longer lasting change for the individuals they encounter with a mental illness. The officer's score on this scale might reveal their belief that if the individual receives immediate and effective treatment, they may actually get better, no longer be dangerous and may be able to better function less disruptively in a community setting.

The results of Hypothesis 6 testing reveal that police officers on the whole value the Jail Diversion Programs in Framingham and Quincy regardless of their level usage of the program. The difference between those who use the program and those who do not are highly statistically significant across the usage levels and regardless of which services they provide. Police officers who use the program for more than just training and ride alongs appear to see the greatest value in it. The outcomes on these confidence intervals reveal a level of support and satisfaction for this program model that is aligned with the hypothesized outcomes but far exceeded expectations.

Chapter 5 Discussion

Police officers clearly play a role in the lives of individuals with a mental illness but prior to this current research; little was known about how readily police officers accept this role. This research is designed to uncover some of these feelings. Study results suggest that police officers in the departments with Jail Diversion Programs (JDP) have a higher tolerance for responding to individuals with a mental illness than officers who are in departments without a program. Based on the results of this study, the presence of a trained skilled mental health clinician in JDP departments appears to provide the officers with confidence and an increased level of comfort in their responses to these often frequent and complex encounters. This appears particularly important given that police officers are often the first to respond to calls involving individuals with a mental illness and are often solely responsible for resolving the psychiatric crisis presented to them.

Estimates about the frequency of these encounters range from 7% (Ruiz and Miller, 2004) to 10% (Cordner, 2006) of all police calls. While the percentage of police calls involving individuals with a mental illness was not the specific focus of this research, police officers in all four departments almost unanimously reported that they do respond to such calls which lends further credibility to the existing research and establishes that police officers in the four departments studied have a frontline role in the management of individuals with a mental illness in the community.

The literature suggests that higher rates of arrest for individuals with a mental illness have led to the conclusion that behaviors associated with mental illness have been criminalized, meaning that individuals with a mental illness are often arrested for behaviors which in their non-mentally ill counterparts would not be considered criminal. This criminalization has had a variety of repercussions ranging from an overrepresentation of individuals with a mental illness in our nation's prisons and jails to an increase in efforts by police to respond more effectively (Teplin, 2000).

The Framingham and Quincy Jail Diversion Programs are founded on the understanding that by working together, mental health clinicians and police officers can respond more appropriately to the needs of individuals in the community with a mental illness and that clinicians (as gatekeepers to the mental health system) can offer the police

an alternative to arrest. The JDP also recognizes that through training and ride alongs, there lies an opportunity to enhance officer understanding of mental illnesses and offer alternative in-the-moment tactics for deescalating situations without resorting to the use of violence (Steadman et al., 2000). The findings of this study reveal that the JDP appears to make the greatest impact in the police officer's attitudes about the presence of individuals with a mental illness in the community and the role which they, as police officers, play in managing them. This was measured using the Cotton scale comparing the scores of officers who work in departments with a JDP (Framingham and Quincy) with those who do not (Lynn and Peabody). After stripping away other potential influencing factors, the difference in means on this scale is statistically significant.

Research in this field has historically focused on the development of a typology of jail diversion activities, evaluating jail diversion rates and the immediate impact of mental health training on police attitudes towards individuals with a mental illness. What this current study examines is whether the actual presence and level of engagement in the activities of a pre-arrest Jail Diversion Program, influences police officer attitudes toward individuals with a mental illness. Prior research focused on the impact of training upon officer attitudes and found that officer attitudes towards individuals with a mental illness were improved immediately post-training. The research does not inform as to the long term impact of training upon officer attitudes and how that influences their interactions with the mentally. Nor does it assess how officers feel about their role in responding to them in the community. Prior to the current study there have been no evaluations of the impact of jail diversion programming upon officer attitudes. This current research begins to fill this void and provides important information about which aspects of jail diversion programming impact the officers in the greatest way.

Although the police have the power to intervene and arrest individuals with a mental illness, police officers also have a great deal of discretion in the commission of their duties. The manner in which they use this discretion greatly impacts the individual at hand, other police officers and the community at large. What determines when officers' use their discretion is a complex question. Cotton (2004) argues that contributing factors influencing the decision not to arrest include the behaviors specific to the individual encounter, the nature of the offence, the complainant and other contextual issues. An additional factor offered by Patch and Arrigo (1999) is 'officer type'; a term used to describe the attitudinal attributes and personality of the individual officer and how this influences their

response to situations involving individuals with a mental illness. Additional studies have examined how officer characteristics and situational factors influence their responses to individuals with mental illness. The outcomes of this current research suggests that officer discretion may also be influenced by the immediate availability of an alternative to arrest; the services offered by a JDP clinician. Officers who used the JDP clinician to divert individuals from arrest had extremely high scores on the satisfaction questions posed in Hypothesis 6. One could argue that discretion is only as good as the available alternatives. The resources and treatment options provided by the JDP clinician on the scene of a call may provide the officer a way to exercise their discretion while still ensuring that the situation is addressed but with treatment rather than an arrest.

The literature review determined that more experienced police officers are likely to informally resolve calls involving individuals with mental illness whereas their less experienced colleagues are more likely to resolve the case with an arrest (Green, 1997). Teplin (1992) found that the decision to arrest was impacted by the officer's belief that the individual's behavior had 'exceeded the public tolerance' and was likely to continue to be a problem. While the factors influencing the decision to arrest was not studied directly, this current study finds that belonging to a supervisory (non-patrolman) rank correlates with less authoritarian and more tolerant attitudes towards individuals with a mental illness. Those officers belonging to the rank of Patrolman had significantly higher officer scores on the CAMI Authoritarianism scale and decreased Cotton scale scores; likely attributable to the volume and intensity of the calls they respond to involving individuals with a mental illness.

Ruiz and Miller (2004) found that police officers often fear individuals with a mental illness and believe that most are unpredictable and violent. Other misconceptions about individuals with a mental illness are that they are incapable of reason (Pinfold, 2003) while Watson et al (2004) explore Labeling Theory's belief that once an officer learns that the individual they are encountering has a 'mental illness,' misconceptions (based on a set of myths and stereotypes) are invoked. While it is not possible to determine the exact relationship between police officer attitudes and their use of discretion when responding to individuals with a mental illness, we can speculate that although their attitudes may not be the sole determining factor, they are certainly a contributing factor and therefore important to understand more deeply.

In this research, these attitudes are best measured by the Social Restrictiveness attitude scale and results in this study show that police officers who have used the services of the JDP clinician have a lower score on this scale. If these officers are influenced by their experiences with the JDP program (to a degree which challenges these stereotypes) the outcome of their interactions with individuals with a mental illness may be positively impacted. This further underscores the importance and value of this model and the associated impact on these particular attitudes.

The decision to arrest and incarcerate individuals with a mental illness (where their needs go untreated at best, and are exacerbated at worst) is challenged in departments with a JDP. This is not to suggest that all individuals with a mental illness should be given a pardon or not be held responsible for their behaviors. There will always be those who deserve to be incarcerated for their serious and violent crimes but police agencies are realizing that there must be alternatives to arrest for individuals who commit minor nuisance offences and have developed programs nationally and as is the focus of this research, in Framingham and Quincy to address this need.

A theme within the results is that the police officers generally value the program very highly and that the more they use it, the more they like it. As to whether or not the presence of the program and its associated activities actually changes the way police officers think, the results are not as robust. What we have learned is that police officers appear to be more confident responding to individuals with a mental illness to the point where they may feel more accepting of their presence in the community and less resistant to responding to these types of calls. Armed with a trained mental health professional, police officers no longer have to rely on their minimal training and lack of understanding about the availability of resources. By definition, police officers take charge of situations and when faced with circumstances which challenge their ability to be in control, an additional tool on their belt such as the JDP clinician appears to be very welcome.

Though the JDP program may not appear to affect police attitudes on the whole, their mere presence and availability may be more important. Attitudes alone are not directly linked to behavior and if officers who have the 'worst' attitudes towards individuals with a mental illness still use the program, the outcome for everyone involved will most likely be better. This is certainly reflected in the JDP satisfaction results. An overwhelming majority of police officers value the program and those who have used it the most, value it the highest.

Impact on Law, Policy and Society

What is clear from this research is that police officers in Framingham and Quincy demonstrate strong support for their Jail Diversion programs. These findings are not unique to this study and amongst departments across the country that have adopted training or developed co-responder models; there is evidence which suggests general satisfaction with them (Borum et al., 1998). The collective understanding among police officers is that calls involving individuals with a mental illness can result in adverse outcomes and may account for their initial willingness to embrace training or a mental health clinician (Berry and Meyer, 1999). This study shows that once programs are available, the officers seem to use them and like them.

We know that when alternative treatment programs are not readily available to police officers, they tend to arrest individuals with a mental illness (Abrams, K.M., 1991). Once arrested, these individuals are often charged with more serious offences and face longer custodial sentences than their non-mentally ill counterparts (Ditton, 1999; Massaro, J., 2003). When individuals with a mental illness are diverted from arrest and into community based treatment, they spend less time in jail, pose a lower risk to society and have the opportunity for a better quality of life than those who are arrested (Steadman and Naples, 2005).

Though not the primary rationale behind the development of Jail Diversion Programs, its impact on the attitude of police officers towards the mentally ill, either directly, through training, or indirectly through ride along and joint response with a clinician, may influence the tone, outcome and risks associated with these interactions. If police officers have the attitude that the mentally ill are more dangerous and less untrustworthy than members of the general population, their actions on the scene may be influenced by those beliefs and lead to an escalation of response and a potentially adverse outcome, be it an arrest of the individual for a minor offence or increased use of force.

The police officers in Framingham and Quincy, who participated in this research, demonstrate a confidence in responding to call involving individuals with a mental illness that officers in Lynn and Peabody do not. Arguably, the presence of a skilled and qualified mental health “expert”, either in their cruiser or at the police station, provides the officer with a level of comfort that is translated into better outcomes for the individual in need. If the officer did

not feel comfortable or confident with their skills in dealing with individuals with a mental illness, one could argue that they would default to their training which is to attempt to take control and gain compliance. Ruiz (1993) suggests that the leading cause of confrontation between police officers and individuals with a mental illness is the lack of understanding between the two parties. The on-scene assistance of a clinician who can bridge that gap and mediate between the two is clearly needed. The co-responder pre-arrest JDP's in Framingham and Quincy appear to provide this greatly needed service. The outcomes of this research support the need for increased funding and exploratory studies of new pre-arrest jail diversion programs across the state. Having more tolerant, informed and confident police officers responding to calls involving the mentally ill may reduce officer-involved shootings and injuries, which would benefit the community at large, the department they serve and the individual officers on the street who encounter individuals with a mental illness.

Study Limitations

Despite the advances made by this research, its shortcomings should be noted. First and foremost, this is relatively small sample size; a larger sample size would be more representative of the police community in Massachusetts. Methods for selecting a sample size were limited in this research by time, expense, and access to police officers. A second and related shortcoming pertains to the selection of the participant communities. This research deals with a small sample of police officers in four police departments in just one state. Additionally, the four police departments used in this sample were somewhat different from one another, especially the City of Lynn. This methodology could have skewed the results as it was not the random sample that the ideal; experimental design, calls for. In order to gain access to police officers who are naturally suspicious and guarded, we relied on my relationships and connection within the law enforcement community to find willing participants for this research, which provided us with a high participant response rate.

Finally, having worked with the Framingham and Quincy Police Departments, my research objectivity may be called into question. My previous relationships with some of the police officers surveyed may have biased their responses. The open manner in which these respondents revealed their attitudes towards individuals with a mental illness could be a result of their comfort level with me. Having an "insider" status definitely improved my access and may have made some police officers more open to participating in the research. It is equally possible that

respondents with whom I have some familiarity changed the way they talked about their experiences to reflect what they thought I wanted them to say. It is impossible to ever know the full extent of such biases on this research and its outcomes but it is important to raise them as a potential concern.

Directions for Future Research

Given that this study explored the attitudes of police officers in four departments in the same state, replication of this study is needed to see if similar results are found in other locations. To help improve the external validity of this study, research is needed in additional locations. The literature review revealed that countries outside of the US are also struggling with the increased number of individuals with a mental illness living in the community and have developed Jail Diversion Programs to assist the police in their response to this population; future studies could attempt similar designs in different police departments in other geographical locations.

Introductory Remarks for Roll Calls Appendix 1

Hello, my name is Sarah Abbott and I am a PhD student in Law, Policy and Society at Northeastern University. My dissertation research is regarding police encounters with the mentally ill. Some police departments have Jail Diversion Programs to assist their officers with the mentally ill and some do not. I am asking officers from both types of police departments to complete this questionnaire. Please let me know if you have any questions. Thank you.

Non-JDP Department Police Officer Questionnaire Appendix 2

The following statements express various opinions about mental illness and the mentally ill. The mentally ill refers to people needing treatment for mental disorders but who are capable of independent living outside a hospital. Please circle the response which most accurately describes your reaction to each statement. It's your first reaction which is important. Don't be concerned if some statements seem similar to ones you have previously answered. Please try to answer all statements.

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1. Dealing with the mentally ill should be an integral part of community policing	SA	A	N	D	SD
2. If mental health services were adequate, the police would not have to deal with the mentally ill	SA	A	N	D	SD
3. Responding to calls involving the mentally ill is not really part of a police officers' role	SA	A	N	D	SD
4. Nowadays, police officers need to have specialized training in dealing with the mentally ill	SA	A	N	D	SD
5. The mentally ill take up more than their fair share of police time	SA	A	N	D	SD
6. People with mental illnesses are a disadvantaged group who deserve special consideration from the police	SA	A	N	D	SD
7. As soon as a person shows signs of mental illness, he should be hospitalized.	SA	A	N	D	SD
8. More tax money should be spent on the care and treatment of the mentally ill.	SA	A	N	D	SD
9. The mentally ill should be isolated from the rest of the community.	SA	A	N	D	SD
10. The best therapy for many individuals with a mental illness is to be part of a normal community.	SA	A	N	D	SD

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
11. Mental illness is an illness like any other.	SA	A	N	D	SD
12. The mentally ill are a burden on society.	SA	A	N	D	SD
13. The mentally ill are far less of a danger than most people suppose.	SA	A	N	D	SD
14. Locating mental health facilities in a residential area downgrades the neighborhood.	SA	A	N	D	SD
15. There is something about the mentally ill that makes it easy to tell them from normal people.	SA	A	N	D	SD
16. The mentally ill have for too long been the subject of ridicule.	SA	A	N	D	SD
17. A woman would be foolish to marry a man who has suffered from mental illness, even though he seems fully recovered.	SA	A	N	D	SD
18. As far as possible, mental health services should be provided through community based facilities.	SA	A	N	D	SD
19. Less emphasis should be placed on protecting the public from the mentally ill.	SA	A	N	D	SD
20. Increased spending on mental health services is a waste of tax dollars.	SA	A	N	D	SD
21. No one has the right to exclude the mentally ill from their neighborhood.	SA	A	N	D	SD
22. Having individuals with a mental illness living within residential neighborhoods might be good therapy, but the risks to residents are too great.	SA	A	N	D	SD

23. The mentally ill need the same kind of control and discipline as a young child.	SA	A	N	D	SD
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
24. We need to adopt a far more tolerant attitude toward the mentally ill in our society.	SA	A	N	D	SD
25. I would not want to live next door to someone who has been mentally ill.	SA	A	N	D	SD
26. Residents should accept the location of mental health facilities in their neighborhood to serve the needs of the local community.	SA	A	N	D	SD
27. The mentally ill should not be treated as outcasts of society.	SA	A	N	D	SD
28. There are sufficient existing services for the mentally ill.	SA	A	N	D	SD
29. The mentally ill should be encouraged to assume the responsibilities of normal life.	SA	A	N	D	SD
30. Local residents have good reason to resist the location of mental health services in their neighborhood.	SA	A	N	D	SD
31. The best way to handle the mentally ill is to keep them behind locked doors.	SA	A	N	D	SD
32. Our psychiatric institutions seem more like prisons than like places where the mentally ill can be cared for.	SA	A	N	D	SD
33. Anyone with a history of mental illness should be excluded from taking public office.	SA	A	N	D	SD
34. Locating mental health services in residential neighborhoods does not endanger local residents.	SA	A	N	D	SD

35. Psychiatric institutions are an outdated means of treating the mentally ill.	SA	A	N	D	SD
36. The mentally ill do not deserve our sympathy.	SA	A	N	D	SD
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
37. The mentally ill should not be denied their individual rights.	SA	A	N	D	SD
38. Mental health facilities should be kept out of residential neighborhoods	SA	A	N	D	SD
39. One of the main causes of mental illness is a lack of self-discipline and will power.	SA	A	N	D	SD
40. We have the responsibility to provide the best possible care for the mentally ill.	SA	A	N	D	SD
41. The mentally ill should not be given any responsibility.	SA	A	N	D	SD
42. Residents have nothing to fear from people coming into their neighborhood to obtain mental health services.	SA	A	N	D	SD
43. Virtually anyone can become mentally ill.	SA	A	N	D	SD
44. It is best to avoid anyone who has mental illness.	SA	A	N	D	SD
45. Most women who were once patients in a psychiatric hospital can be trusted as baby sitters.	SA	A	N	D	SD
46. It is frightening to think of people with mental illness living in residential neighborhoods	SA	A	N	D	SD

47. Have you ever responded to a call involving a mentally ill person? (circle)	YES	NO	
48. In the community that you serve, what percentage of the population would you estimate has mental illness? _____ %			
49. Have you encountered a mentally ill individual who is being violent?	YES	NO	
50. In your experience in responding to calls involving the mentally ill rank the following in order of frequency you encounter violence: 1 is MOST common 3 is LEAST common Toward Self _____ Towards Others _____ Towards You/Police Officers _____			
51. To your knowledge, have you ever arrested a mentally ill person? (circle)	YES	NO	
52. Have you ever had to use force to gain control of a mentally ill person?	YES	NO	
53. What is your rank? Rank: _____			
54. What is your shift assignment? (circle)			
Days	Evening	Midnights	
55. How many years have you been a police officer? _____			
56. How old are you? _____			
57. What is your highest level of completed education? (circle)			
High School Diploma	Associates Degree	Bachelors Degree	Graduate degree
58. What is your gender?			
Male	Female		

JDP Department Police Officer Questionnaire Appendix 3

The following statements express various opinions about mental illness and the mentally ill. The mentally ill refers to people needing treatment for mental disorders but who are capable of independent living outside a hospital. Please circle the response which most accurately describes your reaction to each statement. It's your first reaction which is important. Don't be concerned if some statements seem similar to ones you have previously answered. Please try to answer all statements.

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1. Dealing with the mentally ill should be an integral part of community policing	SA	A	N	D	SD
2. If mental health services were adequate, the police would not have to deal with the mentally ill	SA	A	N	D	SD
3. Responding to calls involving the mentally ill is not really part of a police officers' role	SA	A	N	D	SD
4. Nowadays, police officers need to have specialized training in dealing with the mentally ill	SA	A	N	D	SD
5. The mentally ill take up more than their fair share of police time	SA	A	N	D	SD
6. People with mental illnesses are a disadvantaged group who deserve special consideration from the police	SA	A	N	D	SD
7. As soon as a person shows signs of mental illness, he should be hospitalized.	SA	A	N	D	SD
8. More tax money should be spent on the care and treatment of the mentally ill.	SA	A	N	D	SD
9. The mentally ill should be isolated from the rest of the community.	SA	A	N	D	SD
10. The best therapy for many individuals with a mental illness is to be part of a normal community.	SA	A	N	D	SD

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
11. Mental illness is an illness like any other.	SA	A	N	D	SD
12. The mentally ill are a burden on society.	SA	A	N	D	SD
13. The mentally ill are far less of a danger than most people suppose.	SA	A	N	D	SD
14. Locating mental health facilities in a residential area downgrades the neighborhood.	SA	A	N	D	SD
15. There is something about the mentally ill that makes it easy to tell them from normal people.	SA	A	N	D	SD
16. The mentally ill have for too long been the subject of ridicule.	SA	A	N	D	SD
17. A woman would be foolish to marry a man who has suffered from mental illness, even though he seems fully recovered.	SA	A	N	D	SD
18. As far as possible, mental health services should be provided through community based facilities.	SA	A	N	D	SD
19. Less emphasis should be placed on protecting the public from the mentally ill.	SA	A	N	D	SD
20. Increased spending on mental health services is a waste of tax dollars.	SA	A	N	D	SD
21. No one has the right to exclude the mentally ill from their neighborhood.	SA	A	N	D	SD
22. Having individuals with a mental illness living within residential neighborhoods might be good therapy, but the risks to residents are too great.	SA	A	N	D	SD

23. The mentally ill need the same kind of control and discipline as a young child.	SA	A	N	D	SD
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
24. We need to adopt a far more tolerant attitude toward the mentally ill in our society.	SA	A	N	D	SD
25. I would not want to live next door to someone who has been mentally ill.	SA	A	N	D	SD
26. Residents should accept the location of mental health facilities in their neighborhood to serve the needs of the local community.	SA	A	N	D	SD
27. The mentally ill should not be treated as outcasts of society.	SA	A	N	D	SD
28. There are sufficient existing services for the mentally ill.	SA	A	N	D	SD
29. The mentally ill should be encouraged to assume the responsibilities of normal life.	SA	A	N	D	SD
30. Local residents have good reason to resist the location of mental health services in their neighborhood.	SA	A	N	D	SD
31. The best way to handle the mentally ill is to keep them behind locked doors.	SA	A	N	D	SD
32. Our psychiatric institutions seem more like prisons than like places where the mentally ill can be cared for.	SA	A	N	D	SD
33. Anyone with a history of mental illness should be excluded from taking public office.	SA	A	N	D	SD
34. Locating mental health services in residential neighborhoods does not endanger local residents.	SA	A	N	D	SD

35. Psychiatric institutions are an outdated means of treating the mentally ill.	SA	A	N	D	SD
36. The mentally ill do not deserve our sympathy.	SA	A	N	D	SD
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
37. The mentally ill should not be denied their individual rights.	SA	A	N	D	SD
38. Mental health facilities should be kept out of residential neighborhoods	SA	A	N	D	SD
39. One of the main causes of mental illness is a lack of self-discipline and will power.	SA	A	N	D	SD
40. We have the responsibility to provide the best possible care for the mentally ill.	SA	A	N	D	SD
41. The mentally ill should not be given any responsibility.	SA	A	N	D	SD
42. Residents have nothing to fear from people coming into their neighborhood to obtain mental health services.	SA	A	N	D	SD
43. Virtually anyone can become mentally ill.	SA	A	N	D	SD
44. It is best to avoid anyone who has mental illness.	SA	A	N	D	SD
45. Most women who were once patients in a psychiatric hospital can be trusted as baby sitters.	SA	A	N	D	SD
46. It is frightening to think of people with mental illness living in residential neighborhoods	SA	A	N	D	SD

47. Have you ever responded to a call involving a mentally ill person? (circle) YES NO
48. In the community that you serve, what percentage of the population would you estimate has mental illness? _____ %
49. Have you encountered a mentally ill individual being violent? YES NO
50. In your experience in responding to calls involving the mentally ill rank the following in order of frequency you encounter violence: 1 is MOST common 3 is LEAST common Toward Self _____ Towards Others _____ Towards You/Police Officers _____
51. To your knowledge, have you ever arrested a mentally ill person? (circle) YES NO
52. Have you ever had to use force to gain control of a mentally ill person? YES NO
53. What is your rank? Rank: _____
54. What is your shift assignment? (circle) Days Evening Midnights
55. How many years have you been a police officer? _____
56. How old are you? _____
57. What is your highest level of completed education? (circle) High School Diploma Associates Degree Bachelors Degree Graduate degree

58. What is your gender? (circle)	Male	Female
59. Are you familiar with the Jail Diversion Program? [JDP] (circle)	YES	NO
60. Have you received any in service training from the JDP program clinicians? (circle)	YES	NO
61. Have you used the JDP clinician in any capacity? (circle)	YES	NO
61 b. If yes, has this occurred in the last 6 months? (circle)	YES	NO
62. Estimate how many times you have been on a call with a JDP clinician? _____times		
63. Have you taken the JDP clinician on a ride along? (circle)	YES	NO
If yes, how many times? _____ times		
64. Have you asked dispatch for a JDP response <u>yourself</u> from the scene of a call? (circle)	YES	NO
65. Have you used the JDP clinician to <u>divert</u> an individual from arrest and into mental health treatment?	YES	NO
If yes, estimate how many times? _____		
66. Have you used the JDP clinician to issue a Section 12? (circle)	YES	NO
67. Do you view the JDP program as a valuable resource for the department? (circle)	YES	NO
68. Do you find the JDP clinician helpful to you as a police officer? (circle)	YES	NO

69. Rank in order of importance to you, the characteristics of the JDP program?

1 is the most important, 7, the least important

Familiarity with the JDP clinician _____

Ability of the JDP clinician to de-escalate a situation _____

Ability of the JDP clinician to issue a Section 12 on scene _____

The JDP clinician's familiarity with the individual you are responding to _____

The immediate availability of the JDP clinician _____

The ride along component _____

The in-service training the JDP clinician provides _____

CONSENT FORM Appendix 4

Northeastern University – Law, Policy and Society Program

Principal Investigator: Professor Donna Bishop, **Student researcher:** Sarah Abbott

Title of Project: Evaluating the Impact of a Jail Diversion Program on Police Officer's Attitudes Toward the Mentally Ill

REQUEST TO PARTICIPATE IN RESEARCH

We would like to invite you to take part in a research project. The purpose of this research is to examine the impact a Jail Diversion Program has on Police Officer's attitudes towards the mentally ill.

You must be at least 18 years old to be in this research project. If you decide to take part in this study, I will ask you to complete a questionnaire about your attitudes towards the mentally ill. It will take about 15 minutes. The questionnaire will be distributed at roll call and can be completed at roll call or during your shift. A locked and sealed box will be available at the Department for completed questionnaires to be placed into. Only the researcher will have access to the completed questionnaires.

There are no foreseeable risks or discomforts to you for taking part in this study. All of the questionnaires are confidential and completed questionnaires will be destroyed by me after the research project is completed.

There are no direct benefits to you for participating in the study. However, your answers may help us to learn more about how attitudes towards the mentally ill can be impacted by mental health training and exposure to a Jail Diversion Program.

Your part in this study will be handled in a confidential manner. That means that no one, including this researcher, will know what your answers are. Any reports or publication based on this research will use only group data and will not identify you or any individuals as being part of this project.

The decision to participate in this research project is up to you. You do not have to participate and you can refuse to answer any question. Even if you begin the study, you may withdraw at any time. Your decision to participate, or not participate, will have no effect on your standing in the police department.

You will not be paid for your participation in this study.

If you have any questions about this study, please feel free to call me, *Sarah Abbott* @508-922-6689. You can also contact *Professor Donna Bishop* the Principal Investigator @ 617-373-3362 or d.bishop@neu.edu

If you have any questions about your rights in this research you may contact Nan C. Regina, Human Subject Research Protection, 960 Renaissance Park, Northeastern University, Boston, MA 02155. Tel:617-373-7570, irb@neu.edu. You may call anonymously if you wish.

You may keep this form for yourself.

Thank you very much.

Sarah Abbott

Tests of Between-Subjects Effects

Dependent Variable: Authoritarian mean

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	4.279 ^a	10	.428	2.509	.007
Intercept	8.819	1	8.819	51.704	.000
Ever Respond MI	.009	1	.009	.055	.815
Ever Arrest MI	.037	1	.037	.217	.642
Used Force MI	.037	1	.037	.219	.641
Age	.057	1	.057	.334	.564
Education	.032	1	.032	.185	.667
Patrolman	2.173	1	2.173	12.738	.000
Percent Pop MI	.142	1	.142	.833	.363
Town	.283	3	.094	.553	.646
Error	34.794	204	.171		
Total	1543.880	215			
Corrected Total	39.073	214			

Tests of Between-Subjects Effects

Dependent Variable: Benevolence Mean

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	3.032 ^a	10	.303	1.310	.227
Intercept	21.865	1	21.865	94.472	.000
Ever respond MI	.160	1	.160	.692	.407
Ever Arrest MI	8.897E-5	1	8.897E-5	.000	.984
Used Force MI	.396	1	.396	1.712	.192
Age	.195	1	.195	.844	.359
Education	.021	1	.021	.089	.766
Patrolman	1.137	1	1.137	4.913	.028
Percent Pop MI	.011	1	.011	.047	.828
Town	.578	3	.193	.833	.477
Error	46.983	203	.231		
Total	2748.370	214			
Corrected Total	50.015	213			

Tests of Between-Subjects Effects

Dependent Variable: Social Restrictiveness Mean

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	3.426 ^a	10	.343	1.302	.231
Intercept	8.613	1	8.613	32.724	.000
Ever Respond MI	.004	1	.004	.014	.905
Ever Arrest MI	.146	1	.146	.554	.457
Used Force MI	.309	1	.309	1.174	.280
Age	.305	1	.305	1.159	.283
Education	8.797E-6	1	8.797E-6	.000	.995
Patrolman	1.254	1	1.254	4.763	.030
Percent Pop MI	.038	1	.038	.144	.704
Town	.498	3	.166	.630	.596
Error	53.954	205	.263		
Total	1632.020	216			
Corrected Total	57.380	215			

Tests of Between-Subjects Effects

Dependent Variable: Community Mental Health Mean

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	7.629 ^a	10	.763	1.682	.087
Intercept	13.704	1	13.704	30.210	.000
Ever Respond MI	.082	1	.082	.180	.672
Ever Arrest MI	2.374	1	2.374	5.234	.023
Used Force MI	.644	1	.644	1.420	.235
Age	.114	1	.114	.250	.617
Education	.011	1	.011	.025	.875
Patrolman	1.155	1	1.155	2.546	.112
Percent Pop MI	.356	1	.356	.785	.377
Town	.559	3	.186	.411	.746
Error	91.635	202	.454		
Total	1775.350	213			
Corrected Total	99.264	212			

Tests of Between-Subjects Effects

Dependent Variable: Cotton Score

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	341.941 ^a	10	34.194	3.423	.000
Intercept	618.946	1	618.946	61.954	.000
Ever Respond MI	.140	1	.140	.014	.906
Ever Arrest MI	.996	1	.996	.100	.752
Used Force MI	20.742	1	20.742	2.076	.151
Age	32.324	1	32.324	3.236	.074
Education	4.378	1	4.378	.438	.509
Patrolman	58.067	1	58.067	5.812	.017
Percent Pop MI	29.525	1	29.525	2.955	.087
Town	103.679	3	34.560	3.459	.017*
Error	2058.022	206	9.990		
Total	88601.000	217			
Corrected Total	2399.963	216			

*p<0.05

Tests of Between-Subjects Effects

Dependent Variable: Cotton Score

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	300.233 ^a	8	37.529	3.718	.000
Intercept	634.899	1	634.899	62.893	.000
Ever Respond MI	.347	1	.347	.034	.853
Ever Arrest MI	.514	1	.514	.051	.822
Used Force MI	28.053	1	28.053	2.779	.097
Age	27.767	1	27.767	2.751	.099
Education	16.149	1	16.149	1.600	.207
Patrolman	82.784	1	82.784	8.201	.005
Q48	31.612	1	31.612	3.131	.078
JDP	61.971	1	61.971	6.139	.014*
Error	2099.730	208	10.095		
Total	88601.000	217			
Corrected Total	2399.963	216			

*p<0.05

Appendix 6 **Correlation Matrix**

		Percentage Population	Age	Education	Years as PO
Percentage Population	Pearson Correlation	1	-.208**	-.108	-.177**
	Sig. (2-tailed)		.002	.098	.007
	N	246	223	234	229
Age	Pearson Correlation	-.208**	1	.170**	.782**
	Sig. (2-tailed)	.002		.009	.000
	N	223	238	235	236
Education	Pearson Correlation	-.108	.170**	1	.256**
	Sig. (2-tailed)	.098	.009		.000
	N	234	235	252	242
Years as PO	Pearson Correlation	-.177**	.782**	.256**	1
	Sig. (2-tailed)	.007	.000	.000	
	N	229	236	242	245

** . Correlation is significant at the 0.01 level (2-tailed).

Appendix 7 **Variance Inflation Factors Model**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	21.005	2.818		7.455	.000		
Ever Respond	-.923	2.450	-.027	-.377	.707	.851	1.175
Percentage Population Encountered	-.022	.012	-.121	-1.785	.076	.917	1.091
Violent MI	1.175	1.842	.048	.638	.524	.760	1.315
Arrested MI	-.295	.720	-.030	-.410	.682	.778	1.285
Used Force	-1.592	.928	-.121	-1.716	.088	.842	1.187
Age	.050	.031	.120	1.621	.106	.769	1.300
Education	-.285	.240	-.085	-1.187	.237	.825	1.212
Patrolman	-1.599	.559	-.213	-2.860	.005	.763	1.311
JDP	1.137	.456	.170	2.495	.013	.909	1.100

a. Dependent Variable: Cotton Score

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