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Mental Health Courts Effectiveness in Reducing Recidivism and Improving Clinical Outcomes: A Meta-Analysis

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Mental Health Courts Effectiveness in Reducing Recidivism and Improving Clinical
Outcomes: A Meta-Analysis

by

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A thesis submitted in partial fulfillment
of the requirements for the degree of
Master of Arts
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College of Behavioral and Community Sciences
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illness, offender diversion program

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Dedication

This thesis is dedicated to a few amazing people in my life. Mom and Dad, thank you for being my personal and academic rocks, and showing me I can accomplish any goals that I set my mind to after everything we've been through these past two years. My "sister" Jess for putting up with my neuroticism, strange hours, and making me have some fun away from my desk. Finally, I'd like to thank Krista Kutash, Al Duchnowski, Amy Green, Michael Greeson and the research team (Steph and Bonnie) for teaching me the skills, support, patients, laughter, and lessons throughout this process.

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Table of Contents

List of Tables	iii
List of Figures	iv
Abstract	v
Chapter One Introduction	1
Brief History	2
Evaluation of Mental Health Courts	3
Purpose of the Study	5
Chapter Two Literature Review	7
Serious Mental Illness in the U.S. Prison Population	7
Challenges Faced with SMI in Jails and Prisons	9
Criminalizing the Mentally Ill: Scope of the Problem	10
Factors leading to Higher Incarceration Rates for the Mentally Ill	11
Serious Mental Illness and Recidivism	12
Summary	14
Chapter Three Mental Health Court Literature Review	15
Mental Health Court Definition	15
Goals of Mental Health Courts	15
Theoretical Underpinnings of Mental Health Courts	16
Essential Elements	17
Participant Eligibility	20
Mental Health Court Procedures	21
Variations in Courts	23
Mental Health Court Controversies	23
Polk County MHC Observations	24
Summary	26
Chapter Four Methodology	28
Study Eligibility Criteria	28
Study Selection	29
Measurement Rules	30
Coding Domains	31
Effect Size Coding and Analysis	32
Methodological Quality	32

Moderator Analysis.....	33
Implications.....	35
Summary.....	35
Chapter Five Results.....	36
Characteristics of Studies.....	38
Study Participant Characteristics.....	48
Intervention and Services.....	52
Effect Size Analysis.....	54
Recidivism Outcomes.....	56
Clinical Outcomes.....	59
Moderator Analysis.....	61
Summary.....	65
Chapter Six Discussion.....	66
Intervention and Services.....	70
Reentering the Community and Continuing Care.....	72
Implications for Research.....	74
Limitations.....	76
Future Research.....	77
Conclusion.....	79
References.....	81
Appendices.....	92
Appendix A: Coding Forms.....	93
Appendix B: Maryland Scale of Scientific Method Guidelines.....	101

List of Tables

Table 1	Summary of Article Reviewing and Screening Process	37
Table 2	Characteristics of Studies Included in the Meta-Analysis	39
Table 3	Summary of Study Intervention and Characteristics for Recidivism Outcomes	41
Table 4	Summary of Study Intervention and Characteristics for Clinical Outcomes	46
Table 5	Study Participant Characteristics	50
Table 6	Summary of Effect Size Calculations	55
Table 7	Summary of Moderator Analyses for Recidivism Studies	64

List of Figures

Figure 1	Recidivism Outcomes Forest Plot.....	58
Figure 2	Clinical Outcomes Forest Plot	60

Abstract

Mental health courts have recently emerged with goals to reduce recidivism and improve clinical outcomes for people with serious mental illness in the criminal justice system. The present study is a review of mental health court literature assessing their effectiveness in reducing recidivism and improving clinical outcomes for participants using meta-analytic techniques. A total of 20 studies that included sufficient information to compute the standardized mean difference effect size, focused on adult populations, and were within the United States were included in the analysis. Only experimental and quasi-experimental research designs were obtained. Using Cohen's d (1988) guidelines, mental health courts were found to have a small effect on reducing recidivism (0.32 , $p < .05$) and a nonsignificant effect for improving clinical outcomes for participants. Several moderator analyses were conducted and indicated that the nature of the control group (whether they were a treatment as usual or participants who "opted-out") was found to be significant between groups ($Q=22.33$, $p < .001$) as a possible moderating effect.

Chapter One

Introduction

The substantial numbers of people with mental illness are a major concern in society. Rates of people with mental illness in jails and prisons are much higher than those found in the general population (Lamb & Weinberger, 1998). Ditton (1999) found that 40% of inmates reported receiving some kind of treatment for mental illness and more recently, James and Glaze (2006) reported that 24% of jail inmates had at least one symptom of a psychotic disorder. The overwhelming stress of prison accompanied by the suffering of mental illness makes adjusting to the incarcerated environment extremely difficult. Furthermore, the presence of mental illness can increase criminal recidivism (Dirks-Linhorst & Linhorst, 2010; Baillargeon, Hoge, & Penn, 2010) due to lack of adequate support and resources for community-based treatments once released from incarceration.

As people with mental illnesses continue to come in contact with the criminal justice system, communities across the United States struggle to develop interventions and supports that improve outcomes for these individuals, their service providers, and the public (Almquist & Dodd, 2009). Policymakers and practitioners in a growing number of jurisdictions have developed a number of community-based criminal justice/mental health initiatives. These programs include specialized responses by law enforcement, community corrections, and courts (Baillargeon et al., 2010).

In recent years policy makers and practitioners have been exploring new ways of

responding to individuals with mental illness to improve the outcomes for the criminal justice and mental health systems and the participants involved. One approach to help people with mental illnesses that are frequently entering the criminal justice system are mental health courts, which emerged in the late-1990s in the United States. Mental health courts are a type of court diversion program designed to divert those with mental illness to supervised treatment interventions rather than incarceration. Modeled after “problem-solving courts” (Redlich, Steadman, Monahan, Robbins, & Petrila, 2006) such as drug courts and domestic violence courts, mental health courts specialize in a specific population and take a therapeutic treatment approach (Palermo, 2010). Although not strongly based on theory, these courts operate under the guidance of therapeutic jurisprudence. That is, to produce the most positive therapeutic outcomes not only for the participant, but also the family and public. It is the idea that mental illness contributes to the criminal act and while keeping the law and justice intact, consideration to the emotional and psychological aspects of the offender is given.

The Mentally Ill Offender Treatment and Crime Reduction Act (2003) was a prominent piece of legislation that supported the therapeutic treatment approach for the expansion of these specialty courts. The main objective was to, “increase public safety by facilitating collaboration among criminal justice, juvenile justice, mental health treatment, and substance abuse systems,” (Public Law 108-414) allowing for their further expansion.

Brief History

The development of mental health courts came from the first, although not usually acknowledged court, which was established in 1980 in Marion County, Indiana

(Steadman, Osher, Robbins, Case, & Samuels, 2009). This specialty court operated until 1992 when it was temporarily suspended. It was revived as the PAIR (Psychiatric Assertive Identification Referral/Response) Mental Health Diversion Project in 1996 and continued to serve only mentally ill persons after arrest and booking (Steadman, Davidson, & Brown, 2001). After a couple years of lobbying local authorities in Marion County, the mental health court began as a formal program in 1996.

In 1997, a program launched in Broward County, Florida, was the first court to be recognized and published (Boothroyd, Poythress, McGaha, & Petrila, 2003) as a specialized mental health court. Since 2000, the number of mental health courts has expanded rapidly. It was identified that there more than 120 mental health courts across the country as of 2006. The proliferation of courts was due in large part by the federal Mental Health Court Program by the Bureau of Justice Assistance, which provided funding to 37 courts in 2002 and 2003. Currently, there are an estimated 250 courts (Steadman et al., 2009) in the U.S. with the most recent one in Manhattan, NY in April 2011.

Evaluation of Mental Health Courts

Mental health courts are relatively new. Therefore, outcome information is limited. Results from the few outcome evaluations show that some mental health courts are having positive impacts. However, the long-term effects are still unknown and few evaluations have been conducted that indicate whether mental health courts are responsible for the short-term outcomes achieved. In the first attempt to analyze the diverse array of studies assessing mental health courts, Sarteschi (2009) performed a meta-analysis to investigate the effectiveness of mental health courts in reducing

recidivism, improving clinical outcomes, and overall life satisfaction. A systematic search of the literature was done through May 2008, as well as an e-mail inquiry and hand search that yielded 23 studies. Included were experimental, quasi-experimental, and one-group research designs. The effect size used was the standardized mean difference (SMD) and when data for the SMD was not present, phi correlations were calculated (Sarteschi, 2009). Cohen's *d* (Cohen, 1988) guidelines were used in the interpretation of the effect size. Aggregate effects for recidivism revealed an effect size of -0.52 ($p < .001$). Mental health courts were shown to have a medium positive effect on reducing recidivism for those with serious mental illness in the criminal justice system. Among quasi-experimental studies, there was a small effect size of -0.14 ($p < .05$) for clinical outcomes indicating a positive improvement, but clinical outcomes were not statistically significant overall.

Based on this analysis, mental health courts are supported to be effective interventions for reducing recidivism and improving clinical and quality of life outcomes. However, this finding is not definitive, due to dubious methodological quality and reporting results among the studies. Since data collection ended on this study, new articles have been published assessing the effectiveness of mental health courts including the first four-site study. The evaluative literature is continuing to evolve and single site mental health court studies are slowly becoming aggregated; however, they are still relatively inadequate in gauging the empirical status of such a diverse body of research studies (Sarteschi, 2009) because new studies are emerging annually. Strides are being made to condense this body of literature to meaningful evidence-based conclusions and continuing research on the effectiveness and evolution of mental health courts is

imperative.

Purpose of the study

The purpose of the present work is to provide a review of mental health court outcome data for recidivism and clinical outcomes for people with serious mental illness using meta-analytic techniques. This master's thesis was designed to provide a review of the reasons for their emergence, capture the elements necessary for mental health courts, and to discover if they are effective in reducing recidivism and improving clinical outcomes.

The current study improves upon previous work by including only experimental and quasi-experimental research designs, not including multiple studies that used the same sample from previous years by the same author, and using several studies published after 2009. Thus, the present study has the capacity to yield stronger methodological results.

There are many policy and research implications that potentially can come from this work. The increasing criminalization of the mentally ill is generating concern among policy-makers, criminal justice administrators, and families. If the recent surge in popularity of these specialty courts is any indicator, many more communities across the country will develop mental health courts in the coming years. Evidence-based research supporting their growth is needed, as new courts develop to provide support for the resources and services they provide as well as funding to maintain existing courts. This work is essential for future development, research, and policies.

This paper presents results from a systematic review of mental health court literature. Chapter two delves into the types of mental illness in prison and how and why

the mentally ill have been criminalized. Chapter three is an in depth review of the mental health court literature exploring court components and how they operate, essential elements, and controversies associated with the development of these courts. Chapter four is a carefully detailed process of how the study was conducted. This includes the search strategies used to identify and gather the studies, how and why particular studies were chosen, and the plan for statistical analysis. Chapter five presents the results of the study relating to recidivism and clinical outcomes. The final chapter discusses the implications of the study for the mental health and criminal justice fields, limitations of the study, and conclusions and suggestions of future research for the area of mental health courts.

Chapter Two

Literature Review

The following chapter addresses the various types of mental illnesses inmates suffer from, the prevalence rates, and the frequent challenges faced by this population. The second half of the chapter is a brief history of the circumstances that lead to greater numbers of mentally ill people in the criminal justice system. It concludes with a discussion of relevant literature regarding serious mental illness (SMI) and recidivism.

Serious Mental Illness in the U.S. Prison Population

Studies of U.S. prison populations have consistently found higher rates of serious mental illness relative to the general population (Baillargeon et al., 2010; Lamb & Weinberger, 1998). For individual studies, however, the rates of SMI have varied widely, ranging from 6 percent to 16% (Baillargeon et al., 2010; James & Glaze 2006; Lovell, Gagliardi, & Peterson, 2002; Steadman et al., 2009). This variability is attributed primarily to differences in study designs and methods, including selection and sampling, assessment protocols, and diagnostic tools (Almquist & Dodd, 2009). As an example, although most of the prevalence studies used randomized sampling, others used biased samples such as prisoners referred for psychiatric evaluation (Chiles et al., 1990; Good, 1978). While the majority of investigators used standardized structured interviews to establish a diagnosis of mental illness, several used less reliable methods such as self-reports or “diagnostic impressions” (James & Glaze, 2006).

As shown, there is little agreement about the definitions of the terms mentally ill

offender and offender with serious mental illness. For the purpose of this paper, the definition will be the one some researchers and practitioners refer to as diagnosable major psychiatric disorders—i.e., schizophrenias, bipolar depressions, and organic syndromes with psychotic features—as serious mental illness (SMI) (Jemelka, Trupin, & Childes, 1989).

Serious mental illnesses vary significantly in their severity, symptoms, causes, responsiveness to treatment, duration, and degree to which they impair a person's functioning (David, Van Os, Jones, Harvey, Foerster, & Fahy, 1995; Soderstrom, 2007). The most commonly reported SMI's in prison are schizophrenia, bipolar disorder, and major depression (Pinta, 1999). These three major disorders are discussed separately below.

Schizophrenia is a group of mental disorders characterized by major disturbances in thought, perception, emotion, and behavior (American Psychiatric Association [DSM-IV-TR], 2000). It impairs a person's ability to think, make judgments, reason, respond emotionally, remember, communicate, interpret reality, and behave appropriately and is accompanied by hallucinations and delusions. As many as 5 percent of prison inmates may have schizophrenia (National GAINS Center, 1997; Pinta, 1999), a rate up to four times greater than the rate found in the general population (approximately 1.3 percent) (U.S. Department of Health and Human Services, 1999).

Bipolar disorder is a mood disorder that includes a number of variations and subtypes. Generally, individuals with bipolar disorder experience serious mood swings, episodes of mania that alternate with episodes of deep depression (DSM-IV-TR, 2000). Bipolar disorder is thought to affect 6 percent of the prison population (Pinta, 1999) and 4

percent of the United States general population (National GAINS Center, 1997).

Major depression is a mood disorder that generally occurs as an episode or series of episodes of severe depression. Individuals with major depression may have difficulty concentrating, focusing, remembering things, or making simple decisions, and even experience psychotic symptoms such as delusions (DSM-IV-TR, 2000). Persons suffering from major depression are at increased risk for suicide and may be preoccupied with thoughts of death. Some studies show that depression may affect up to 9 percent of the prison population and 6 percent in the United States general population (National GAINS Center, 1997; Pinta, 1999).

Serious mental illness is not the only issue facing inmates in the U.S. prison system. The SAMHSA National GAINS Center (1997) reports that a quarter of the prison population exhibits active alcohol abuse and dependence and about a fifth exhibits drug abuse or dependence (Junginger, Claypoole, Laygo, & Crisanti, 2006). About 1 in 6 of the prison population has both a serious mental illness and a co-occurring substance abuse disorder (Almquist & Dodd, 2009). Co-occurring disorders refer to substance-related and mental disorders that are diagnosed as being present in an individual at the same time, and exist when at least one disorder of each type can be established independently of the other and is not simply a cluster of symptoms resulting from a single disorder (Center for Substance Abuse Treatment, 2005). Among those diagnosed with schizophrenia, bipolar disorder, or major depressive disorder, the prevalence of co-occurring substance abuse is 90 percent (National GAINS Center, 1997).

Challenges SMI Presents in Jails and Prisons

There are many challenges associated with having persons with SMI in jail or

prison. The first is that these offenders get caught up in the “revolving door” and are dubbed “frequent flyers” (Torrey, Kennard, Eslinger, Lamb, & Pavle, 2010). These inmates received little to no consultation or resources when discharged from jail or prison to help integrate them back into the community. “In the Los Angeles County Jail, 90 percent of mentally ill inmates are repeat offenders, with 31 percent having been incarcerated ten or more times” (Torrey et al., 2010, p. 9).

Mentally ill inmates also cost more to incarcerate than non-mentally ill inmates. On average, Miller and Fantz (2007) found that persons with SMI cost \$130 a day compared to \$80 a day for a person without serious mental illness. Major contributors to the cost are the medications the inmate has to take, evaluations, and law suits for alleged abuse.

Criminalizing the Mentally Ill: Scope of the Problem

In order to understand current challenges of the U.S. prison system and inmates with SMI, an examination of the prison systems evolution into what it has become today is warranted. In 1880, the first comprehensive census done in the United States found that 397 persons with mental illness were incarcerated in prisons or jails, representing 0.7% of the correctional population (Baillargeon et al., 2010). Over the next seventy years, substantial increases of persons with mental illness ended up in prisons and jails (Lurigio, 2000). Torrey et al. (2010) reported that a psychiatrist in San Mateo County published a study reporting a 36% increase in mentally ill prisoners in the county jail. Moreover, Telpin (1984) reported on people with mental illness and their involvement in the criminal justice system. Results indicated the mentally ill persons were arrested 15.8% more often than those without mental illness (7.5%), which was found to be

statistically significant.

Factors Leading to Higher Incarceration Rates for the Mentally Ill

The significant increase in arrest rates was due to various historic events. In the 1950s, the introduction of anti-psychotic medications changed the criminal justice and mental health care systems. These new medications gave caretakers and families confidence in less forceful care and better predictability of patient behaviors (Grob, 1994; Mechanic, 1999). Treatment with these medications showed a reduction in the perceived danger to those who took them and to others, anticipating they could lead “normal” lives (Torrey et al., 2010). However, new medications significantly improved the symptoms and behaviors for some of patients, but there was a failure to recognize that many of the patients were not able to make informed rational decisions about their own need for medication (Baillargeon et al., 2010).

As a result of the lack of sufficient treatment by hospitals a decision was made to close many of the state mental hospitals, deinstitutionalize the patients, and offer treatment at community-based facilities (Frank & McGuire, 2010). The hope was to place the mentally ill in communities and provide resources, support, and treatment that would permit them to lead productive lives. The majority of patients were released in mass. People who had been receiving medication and were then stable were released into the community with no treatment and no means to ensure that they were taking their medications. The failure to provide treatment and the absence of sufficient treatment facilities inundated the criminal justice system (Torrey et al., 2010).

Political changes during the time of deinstitutionalization had an effect on people with SMI as well. Until the mid-1970s there was an emphasis on rehabilitation and

indeterminate sentencing policies (MacKenzie, 2001) that were the foundations of the criminal justice system. This steadily changed at the end of the 20th century to a focus on punishment and incarceration. The shift in sentencing requirements and policies included mandatory minimums, “three strikes” laws, and “truth-in-sentencing” laws (Baillargeon et al., 2010). The war on drugs had subsequent effects on criminalizing the mentally ill (Caulkins, Reuter, Iguchi, & Cheisa, 2005). Incarceration was a primary weapon during the war on drugs, establishing minimum penalties for these offenses. In 1975, the incarceration rate for federal and state prisons was approximately 100 per 100,000 adults for the general populations (Mackenzie, 2001). By 1995, that rate quadrupled due to the large amount of substance abuse offenders arrested (Baillargeon et al., 2010; Hoge, 2001).

These policies had a direct effect on the criminalization of the mentally ill. Due to mandatory minimums, the courts could no longer use as much discretion when looking at mental illness as a mitigating factor of the offense (Baillargeon et al., 2010). The ambition for the war on drugs seemed to have a negative effect for the mentally ill, resulting in disproportionate imprisonment for those who had drug related offenses (Mackenzie, 2001). There have been many changes in the U.S. prison system throughout the 19th and 20th centuries. The shift from rehabilitation to punishment in the criminal justice system has caused a disproportionate increase in inmates with SMI.

Serious Mental Illness and Recidivism

An important issue to examine in regards to inmates with SMI is criminal recidivism, the tendency to relapse into illegal behaviors for released offenders. Lovell and colleagues (2002) reported on recidivism for severely mentally ill inmates release

from several prisons in Washington State and defined recidivism as the number of new convictions for the offender. There were 337 with a post-release follow-up period of an average of 39 months (range 27 to 55 months). In this sample, 70% had new convictions (41% were new felony convictions).

Further support was found by Solomon, Draine, & Marcus (2002) who studied 250 offenders with serious mental illness referred to a special psychiatric probation and parole program. They tracked incarcerations for 15 months after entering the program. They found that 18% were reincarcerated for new criminal offenses and 16% were reincarcerated for technical violations (i.e. parole). Moreover, Case and colleagues (2009) analyzed data for 14 jail diversion programs receiving federal funding to work with offenders with mental illness. They tracked rearrests among 546 study participants and found that 52.7% were rearrested within 1 year of entering the program. This evidence maintains that inmates with SMI are far more likely to have a history of incarcerations when compared to inmates with no symptoms of SMI (Baillargeon et al., 2010).

Finally, the most recent study of SMI and recidivism was done by Cloyes (2010). A study of Utah State prisoners released from 1998 to 2002 (N = 9,245) who meet criteria for SMI was compared with non-SMI offenders on length of time to prison return. Results found that one fourth of the sample met the criteria for SMI. When comparing reincarceration rates for both groups, the median time was 385 days for SMI and 742 days for non-SMI, which was found to be statistically significant ($p < .05$).

The above data illustrate the ongoing challenges with the incarcerated seriously mentally ill. As diversion programs are emerging, the law is becoming more flexible and diverse for people with serious mental illness.

Summary

This chapter reviewed the prevalence of serious mental illness in prison and the challenges associated with this specific population. It also outlined some historical circumstances and policy changes that lead to the increase numbers of mentally ill within the criminal justice system. Also included was a discussion on SMI and recidivism. The next chapter is a review of the mental health court literature.

Chapter Three

Mental Health Court Literature Review

The following chapter provides the definition and components of mental health courts. Specifically, it includes the general characteristics and eligibility criteria, the theoretical underpinnings, a brief discussion of the current controversies, and the many variations among the courts. The chapter closes with qualitative observations from a mental health court in central Florida.

Mental Health Court Definition and Overview

The current general “working definition of a mental health court is a court with a specialized docket for certain defendants with mental illnesses” (Almquist & Dodd, p. 5, 2009). As with other initiatives these courts are designed to straddle two worlds of the criminal justice system and mental health system (Bazelon Center for Mental Health Law, 2004). They are united by the common themes of substituting a problem-solving model for traditional criminal court processing and an emphasis on linking defendants to effective treatment and supports (Almquist & Dodd, 2009).

Goals of Mental Health Courts

There are four critical goals that need to be addressed. The first is to reduce criminal recidivism for those with mental illness while not compromising the safety of the public (Redlich, 2005; Redlich, Steadman, Monahan, Robbins, & Petrila, 2010; Steadman et al., 2009). Second, to increase treatment engagement by encouraging treatment, rewarding adherence, and sanctioning noncompliance. Third, is to improve

the quality of life for the participant by connecting them with the appropriate services and resources to support their recovery. The final goal is to use the resources effectively by reducing contact with the correctional system and thus, reducing cost (Redlich et al., 2010).

Within this framework, mental health courts seem to operate successfully. Contributing to their operation is also the underlining theoretical idea that guides the everyday practices.

Theoretical Underpinnings of Mental Health Courts

The development of mental health courts progress with a limited theoretical framework guiding the process, however, like drug courts, they seem to successfully run under the idea of therapeutic jurisprudence. Therapeutic jurisprudence by definition is the “study of the role of the law as a therapeutic agent” (Wexler & Winick, 1996). It focuses on the law's impact on emotional life and on psychological well-being. These are areas that have not received very much attention in the law until now. Therapeutic jurisprudence focuses our attention on this previously underappreciated aspect, humanizing the law and concerning itself with the human, emotional, and psychological side of law and the legal process (Wexler & Winick, 1996). With therapeutic jurisprudence, consideration is given to whether the law can be made or applied in a more therapeutic way, so long as other values, such as justice and due process, are fully respected (Watson, Luchins, Hanarahan, Heyrman & Lurigio, 2000). This is achieved, mainly by the compassionate judge-client relationship, by treating participants with respect, engagement, and actively listening to them.

The objective of therapeutic jurisprudence is to produce the most positive

therapeutic outcome not only for the client, but also for the client's family, and for the public (Palermo, 2010). Therapeutic jurisprudence requires that professionals from all disciplines collaborate and be sensitive and malleable to the possible outcomes of legal decisions (Madden & Wayne, 2003). Punishment should not be the only focus of the courts, but the well being of the offender should be assessed to get a more accurate picture of what justice really is for a particular individual (Frank & McGuire, 2010). That is, keeping the law in mind, issues of psychological well-being are considered and factored into law-making and public policies whenever possible. In order to accomplish this, mental health courts share a variety of elements to provide the best possible services to support success for the participant (Casey & Rottman, 2000).

Essential Elements of Mental Health Courts

Mental health courts often share a variety of similar features, however, their implementation of the program varies widely (Almquist & Dodd, 2009; Driks-Linhorst & Linhorst, 2010). These courts rely on ten essential elements of mental health courts design and implementation laid out by the Bureau of Justice Assistance in 2006.

1. Planning and Administration: A broad-based group of stakeholders representing the criminal justice, mental health, substance abuse treatment, and related systems and the community guides the planning and administration of the court.
2. Target Population: Eligibility criteria address public safety and consider a community's treatment capacity, in addition to the availability of alternatives to pretrial detention for defendants with mental illnesses.

3. Timely Participant Identification and Linkage to Services: Participants are identified, referred, and accepted into mental health courts, and then linked to community-based service providers as quickly as possible.
4. Terms of Participation: Terms of participation are clear, promote public safety, facilitate the defendant's engagement in treatment, are individualized to correspond to the level of risk that the defendant presents to the community, and provide for positive legal outcomes for those individuals who successfully complete the program.
5. Informed Choice: Defendants fully understand the program requirements before agreeing to participate in a mental health court. They are provided legal counsel to inform this decision and subsequent decisions about program involvement.

Procedures exist in the mental health court to address, in a timely fashion, concerns about a defendant's competency whenever they arise.
6. Treatment and Support Services: Mental health courts connect participants to comprehensive and individualized treatment supports and services in the community. They strive to use—and increase the availability of—treatment and services that are evidence-based.
7. Confidentiality: Health and legal information should be shared in a way that protects potential participants' confidentiality rights as mental health consumers and their constitutional rights as defendants. Information gathered as part of the participants' court-ordered treatment program or services should be safeguarded in the event that participants are returned to traditional court processing.
8. Court Team: A team of criminal justice and mental health staff and service and treatment providers receives special, ongoing training and helps mental health court

participants achieve treatment and criminal justice goals by regularly reviewing and revising the court process.

9. Monitoring Adherence to Court Requirements: Criminal justice and mental health staff collaboratively monitor participants' adherence to court conditions, offer individualized graduated incentives and sanctions, and modify treatment as necessary to promote public safety and participants' recovery.
10. Sustainability: Data are collected and analyzed to demonstrate the impact of the mental health court, its performance is assessed periodically (and procedures are modified accordingly), court processes are institutionalized, and support for the court in the community is cultivated and expanded.

This cross-system collaboration focuses on systems and agencies coming together to support in the recovery of a defendant (Council of State Governments, 2005). Along with the essential elements, other common features of mental health courts include criminal courts with separate dockets for people with mental illness, diversion from the criminal justice system into mental health treatment, community supervision to ensure fulfillment with treatment and other court requirements, inducements for compliance and sanctions for noncompliance, and voluntary participation (Desmond & Lenz, 2010; Dirks-Linhorst & Linhorst, 2010). Charges may be dropped, depending on the court, for compliance and graduation with the program (Almquist & Dodd, 2009).

In past years, these specialty courts would only hear misdemeanor offenses and in recent year's nonviolent felony courts have emerged. When court officials and community service providers became accustomed to the mental health court model and confident in its outcomes, they began to support the idea of enrolling offenders with

felony convictions or a history of violence and those currently charged with felonies, including violent crimes (O’Keefe, 2009). Experiencing the positive influence of treatment for participants’ behavior can increase willingness to use court supervision and treatment as an alternative to incarceration. Moreover, some violent behavior can be attributed to untreated mental illness, and, once policymakers and practitioners observe that mental health courts support medication adherence, they tend to be more interested in applying the same intervention to people charged with serious or violent crimes (Almquist & Dodd, 2009; Justice Center Mental Health Consensus Project, 2008).

Participant Eligibility

Mental health courts accept individuals with a wide variety of offenses including both misdemeanor and felony charges. Decisions to accept individuals charged with certain types of crimes are based on many factors. Courts that focus primarily on misdemeanors will typically target individuals with misdemeanor charges depending on court jurisdiction. Mental health courts today are more likely to admit offenders charged with violent crimes on a case-by-case basis.

In addition to a court accepting various kinds of offenses, other criteria to participate are required. In general, the most common diagnoses accepted within these courts are schizophrenia, bipolar disorder, or major depressive disorder (anxiety, brain traumas, and personality disorders are also included in some) (Lurigio, 2000). Not all, but some courts do limit the eligibility to persons with serious mental illness for which there is a known treatment, such as the Brooklyn MHC (O’Keefe, 2006). Mental health courts sometimes focus on a target populations “that are often shaped by state mental health priority population definitions because these definitions affect the relative

availability of treatment services that community providers can offer and be reimbursed for by the state or federal government” (Almquist & Dodd, 2009, p. 11).

Referral is necessary to participate in a mental health court (Redlich, 2005). This can come from defense attorneys or judges, as well as jail staff, service providers, and family members (O’Keefe, 2009). Once referred, the individual has the right to decline because participation in these types of programs is voluntary.

These specialty courts generally require a plea of guilty to be accepted, a minimum of one year within the program, and are completely voluntary (Redlich, 2005). They provide more than the traditional criminal justice system in terms of mental health care and supervision. Mental health courts have links to the public health system to provide treatment, services, support, and resources after discharge to enable the individual to have the best possible chance for success (Lamb & Weinberger, 2005). Moreover, once deemed eligible, each participant’s treatment plan and tools for success vary. Their treatment plan “team” includes a judge, prosecutors, defense attorney, probation or parole officers, case manager, and mental health treatment providers. All parties work collaboratively to ensure the best possible plan for success (Steadman et al., 2009).

Mental Health Court Procedures

Upon enrollment to the program, mental health court participants are immediately connected to mental health care services and are assigned a case manager. Studies show varying wait times for participants once they are referred to the program. A Steadman and Redlich (2006) reported the average wait time to be two to three months while another study reported 32 days (O’Keefe, 2006). Participant must report to court a

regular basis to discuss their progress or revise their treatment plans. The average length of a mental health court program is 12-18 months (Almquist & Dodd, 2009).

Before each court session is held, the mental health court team meets to discuss each case and report each participant's progress to the judge. Discussions of rewards for adherence to treatment or penalties for noncompliance are done here. As the participant shows progress within their own goals, they are required to attend court less (Steadman & Redlich, 2006). Once they are deemed able to handle their mental illness and meet their individual goals the participant graduates from the program.

For the participant, this process is very structured and requires supervision until graduation. Monthly drug screenings are required for participants with a co-occurring disorder to be completed at the courthouse. Medication is checked in the court every week to ensure participants are adhering to procedures and adjustments can be made if necessary. Usually, throughout the entire process, the same judge, case managers, staff, and courtroom are used to maintain consistency. However, this is not the case for every court. While consistency within the court may be maintained, between the courts is where variations emerge.

Variations in Courts

It is important to recognize that there is no overall consensus definition of what constitutes a mental health court (Christy, Poythress, Boothroyd, Petrila, & Mehra, 2005) and that they operate under their own procedures and guidelines based on location and available treatment (Steadman et al., 2001). Contributing to variations in characteristics and procedures between mental health courts are the number of community resources available, the availability of and access to mental health and substance abuse services,

public opinion, and the traditional criminal court systems (Sarteschi, 2009). All these systems or social boundaries can influence the operation and implementation of a mental health court and can help explain the variations between courts across the country (Wales, Hiday, & Ray, 2010). With so many variations across courts, challenges emerge when balancing the knowledge of the court process and the defendant's rights.

Mental Health Court Controversies

For the criminal justice system and the community, mental health courts have been useful for facilitating case processing, saving court resources, and reducing subsequent offending (BJA, 2010). However, they are not without controversy. This can include challenges with plea-bargaining, non-compliance, and coercion.

Many of these courts use plea-bargaining when handling the original sentences, which is a similar characteristic to drug courts. However, it is controversial because people with mental illness aren't always cognitively aware of the conditions to accept plea-bargains. A defendant must plead guilty once entering the program, thus establishing a criminal record (Griffin, Steadman, & Petrila, 2002). After completion, many records are expunged, but this is a long and laborious process. If the charges are not expunged, this action can have a very serious consequence on the individual. Once in the criminal justice system, the impact it has on employment, health care, residential status, and voting is profound (Erickson, Campbell, & Lamberti, 2006).

The types of sanctions used in mental health courts are potentially problematic as well. Incarceration is a legal right for non-compliance with court mandates; however, the effect it has on treatment and psychosocial symptoms could be extremely negative for someone with SMI (Griffin et al., 2002). A study in 2006 found that use of jail as a

sanction for noncompliance was predicted by the percentage of diversion program participants who were felons (Redlich et al., 2006). It was found to be a public safety issues because the participants who commit felonies are more of a perceived threat to the public and jail is used as a sanction to prevent further violence (Redlich et al., 2006).

Coercion is another concern in the process of mental health courts (Redlich, Hoover, Summers, & Steadman, 2010). Many individual court teams address concerns surrounding coercion to enroll and coercion to take medication in several ways (Griffin et al., 2002). Enrollment in the court is voluntary, and the program participation guidelines and program contract clearly display the rights and responsibilities of the defendant, the judge, and staff (Boothroyd et al., 2003). Medication compliance is mandated; however, participants receive opportunities to discuss medication with team members and the judge and medication is checked and verified during court appearances (O'Keefe, 2009). These possible controversies lay within every mental health courts foundation. Identifying and understanding them allow for a greater awareness of these challenges and possible explanations for them. To discover solutions and other possible challenges that might not have been mentioned in the literature, seeing a court in operation first hand was believed to be vital to this research.

Polk County MHC Observations

In order to obtain a more thorough understanding of the functioning of these specialty courts, formal observations were made by visiting one. When implemented in 2007, the Polk County mental health court in Florida was designed to help alleviate the numbers of men and women with serious mental illness in the criminal justice system. It is estimated that about 15% of Polk County's inmates are on psychotropic drugs, making

the county jail system the largest institution in the county that houses those with mental-health issues (Edwards, 2006). On November 19, 2010, a visit to the Polk County court lead to observations about the judge-client relationship and mental health court process.

Qualitative observations revealed that basic processes such as the distribution of paperwork and honors or awarding a participant a phase certificate were used as positive reinforcement for these individuals. The judge, Judge Flood, frequently discussed with the case managers and psychiatrist and clinical representatives of the mental health system for clarification on mental health issues or services offered by local providers. As participants progressed through the program all parties became more comfortable, candidates and participants started speaking more often, appearing in court when their attorneys (not all had an attorney) could not be present, and waving at the judge from the audience. The judge would invite participants to approach the bench and extend an invitation to shake their hand. The judge required weekly drug test for each participant and provided bus passes for him or her to come down to the courthouse and do this. There was compassion, respect, and communication among both the staff and participants.

Observation notes highlight that the judge is willing to address and be addressed by participants in unconventional ways within the limits of maintaining order and public safety. She will make eye contact with anxious candidates and participants or wave to family members. For example, the time was around Thanksgiving and the judge asked what the participant was doing for the holiday. She loved to cook and told the judge each dish she was making. The judge in turn shared a favorite recipe of her own and each said something they were thankful for that year. The judge complies with requests but was

still very clear that she expects the participants to remain in compliance with the court's mandate. Observations indicated a high level of participant engagement responsiveness when interacting with the court.

A defendant was brought over from the jail to begin the program after a referral from his defense attorney. He was previously eligible for court services and when asked why he declined before he said, "It was called Mental Health Court and someone explained it to me as Behavioral Health Court. My behavior needs to be changed". He was diagnosed with schizophrenia and committed misdemeanor offenses. The judge explained that the rules were still the same for this Mental Health Court and he would have to adhere to all court supervised requirements. Observations showed that he was willing to comply and was required to maintain a residence at a group home that the court would provide resources for.

Summary

As shown, the Polk County court observations parallel the general process of a mental health court and the process participants embark on which were laid out earlier in the chapter. Additionally, this chapter showed that mental health courts provide those with serious mental illness access to receive the treatment and basic needs necessary to prevent future recidivism. Also described was the process of how courts require those participants to adhere to therapy, often times medication, provide resources on housing, and substance abuse treatment. The services these courts provide may increase the quality of life for these people with mental illness. By applying the critical elements and characteristics, courts can protect the general public and improve the lives of those who suffer from mental illness (Lamb & Weinberger, 2008).

It is imperative that policy decisions regarding serious mental illness among criminal offenders, and indeed policy decisions of any kind, be based on empirical evidence. Thus, the need for a comprehensive systematic review of the effectiveness of mental health court strategies is essential in order to provide a framework from which policy makers can formulate evidence-based decisions regarding the most appropriate strategies to be employed in varying situations.

Chapter Four

Methodology

This chapter provides a detailed explanation of the methods used in this meta-analysis. Specifically included is information pertaining to selection criteria, which databases were searched for studies, and Internet resources searched and accessed. It also provides information regarding how data were extracted, how study quality was assessed as well as how data was managed during each step in the quantitative review process. The second half of the chapter describes the coding domains and statistical analysis procedure.

Study Eligibility Criteria

Studies included in the analysis were those, (a) confined to the United States¹; (b) written in English; (c) focused on individuals who were 17 years and older with a mental illness; (d) reported at least one quantifiable recidivism or clinical outcome that permitted reasonable computation of an effect size statistic (Landenberger & Lipsey, 2005).

Articles or reports excluded from the analyses were those, (a) studies that did not report clear and measured criminal recidivist outcome in a quantifiable form or that did not allow for the calculation of a quantifiable outcome; (b) studies that were more descriptive or exploratory in nature; (c) studies that focused on reporting characteristics of mental

¹ It was assumed other country's criminal justice systems vary greatly and a stronger analysis could be conducted for studies only within the United States.

health courts across a wide variety of courts such as surveys or qualitative reports; (d) studies that focused on jail or prison treatments for mentally ill offenders such as therapeutic communities that were not related to these courts; (e) studies that reported outcomes for pre and post booking programs or programs generally considered unspecified jail diversion programs; and lastly, (f) one-group research designs because they are viewed as methodologically weak (Lipsey & Wilson, 2001).

Study Selection

A comprehensive literature search was conducted from 1997 through April 2011, of MEDLINE, PsychINFO, PubMed, ERIC, Social Science Abstracts, Social Work Abstracts, Social Science Citation Index, Sociological Abstracts, ProQuest Digital Dissertations database, Social, Psychological, Criminological, the Cochrane Library database and the National Criminal Justice Reference Service (NCJRS) databases.

Other search strategies included the hand searches of journal article reference sections and a query of authors who were thought to have prospective unpublished or forthcoming studies of mental health courts. Mental health and government websites such as the National Institute of Justice (NIJ) were also searched extensively as well as Google Scholar. Aspects of the aforementioned search process were repeated weekly and monthly to ensure that no new studies had been published.

Keyword searches in each of the above listed databases included the following mental health courts, mental health courts program, mentally ill in courts, mentally ill offenders, serious mental illness, severe mentally ill offenders, severe mentally ill, SMI, incarcerated mentally ill, imprisoned mentally ill offenders, mentally ill in prison, mentally ill prisoners, jail diversion programs, and mentally ill court programs.

After removing duplicate citations or any other reference that did not meet the aforementioned inclusion criteria, the studies that remained were retrieved and assessed in their hardcopy form to ensure they met inclusion criteria. Approximately 45 studies were reviewed and a total of 20 were found to meet inclusion criteria.

Studies were included if they used experimental or quasi-experimental designs that compared a treatment condition with a control, comparison or waitlist group (Landenberger & Lipsey, 2005), or if the study participants received the treatment after a predetermined amount of time, known as an intention-to treat group (the measure could have been self-report or derived from clinical or court records and could have been reported on either a dichotomous or continuous scale) (Wilson, Mitchell & MacKenzie, 2006). Studies were deemed ineligible if the author(s) used the same sample for separate studies. For example, Cosden and colleagues (2003, 2005) used the same sample for the 2003 and 2005 studies and the most recent study will be included in the analysis. Both published and unpublished studies were deemed eligible for inclusion.

Measurement Rules

Recidivism outcome measure was coded according to the following priority ranking: bookings rates, re-arrests, new convictions, and jail days. Clinical outcome measure was coded according to the following priority ranking: established measures (i.e. BASIS-32, BPRS, or GAF), hospitalization days, and psychiatric visits. Finally, the timing of the outcome was also prioritized. Results for the outcome measurement at 12 months after enrollment into the program or when the treatment program ended was used.

Coding Domains

Descriptive and outcome data were extracted for each of the studies. The descriptive data collected specifically included citation information, sample size, participants age, gender, race or ethnicity, type of crimes the mental health court programs dealt with (misdemeanor or felony, or both), study design, measures, study quality, and salient findings- all recorded on one coding form (the coding form can be found in Appendix A). All studies were systematically coded to record particulars related to study level characteristics, sample level characteristics, and outcome level characteristics. Five categories were developed to account for:

1. Study descriptors: author, year, and type of publication.
2. Intervention data: nature (What type of intervention is it?), intervention implementation date, level of intervention (local, regional, state, national, international), length of intervention, and the implementation dosage (What specifically did the experimental group/area receive in the way of intervention?).
3. Research design: design type, unit of observation, analytical techniques used, test for significance, sample size, measurement of control variables, pre and post intervention measurement periods, and methodological rigor.
4. Characteristics of subject and setting: type of area and relevant characteristics of target/setting.
5. Outcome data to calculate effect size: measures of recidivism (eg. number of jail bookings) and observational clinical outcomes; all data relevant to the calculation of effect sizes (means, standard deviations, etc).

Effect Size Coding and Analysis

The Effect Size Determination Program (Wilson, 2001) computes standardized mean difference effect sizes, Cohen's d (1988) and the correlation coefficients (r) from summary statistics such as the means, standard deviations, t -tests, frequencies, etc. It was used to assess standardized mean difference to discover the effect of MHC on recidivism. The basic formula for the common effect size for the standardized mean is the difference between the group means divided by the pooled standard deviation. The formula is as follows: $ES_{sm} = (X_2 - X_1) / S_{pooled}$ (Lipsey & Wilson, 2001). Furthermore, if the variable was dichotomous, the odds ratio effect size was then converted to Cohen's d .

Data were entered into and analyzed using STATA statistical software. Further analysis dictates the use of weighted t -test/ANOVA to examine variation in effect size by coded features (i.e. examining the relationship between methodological rigor related to effect size).

Presentation of results for the analysis will include standardized mean difference effect size, 95% confidence intervals, p -values, and forest plots for all studies combined. Heterogeneity was addressed by providing Q -statistics and their associated p -values. The Q -statistic is distributed as a chi-square with $k-1$ degrees of freedom with k being the number of effect sizes and when Q is statistically significant a random effects model was assumed (Lipsey & Wilson, 2001).

Methodological Quality

The Maryland Scale of Scientific Methods (MSSM) is a scale developed by a University of Maryland Criminology and Criminal Justice research group (Sherman et al., 1997), guidelines are provided in Appendix B. The group was selected by the United

States Department of Justice to systematically assess which of the known juvenile crime prevention programs work (Sherman et al., 1997). The scale was created to give a measure of internal validity and program effectiveness and to rate each evaluation research design based on a five- point scale. A score of one would be considered a weak design indicating that no comparison group was used and a score of five would be the strongest (Sherman et al., 1997) and would specify that a randomized controlled design was used. According to the scales' developers, a minimum score of three is required before adequate conclusions should be drawn about a study's ability to ascertain true program effects.

Moderator Analysis

A moderator analysis was conducted when data were available on possible moderator variables as publication type or methodological quality. The MSSM was used to assess methodological quality because it was designed for reviewing experimental and quasi-experimental research designs. The 20 studies were divided into two groups of either (1) high quality (score of 4 or higher) or (2) low quality (score of 3 or lower). The method was chosen based on guidance from the committee chair. This method for dichotomous division was employed due to the lack of objective guidelines on how to best rate and conceptualize methodological quality using the MSSM. Once each study was identified as either high or low quality, the mean effect size and confidence intervals were compared. If the Q-statistic between the groups were significant, a moderating effect would be assumed.

There were two other moderator analyses done. A comparison for the nature of the control group as being either TAU (treatment as usual) with a matched sample to the

treatment group or studies that reported participants “opted out,” meaning they were eligible, but chose not to participate. If this is shown to be a moderating variable, more research is necessary to discover what characteristics about those who choose to participant versus those who opt-out.

The final analysis focused on attrition rates for studies that reported it. There had to be at least a 10% attrition rate for either group. Studies that reported attrition were compared to studies that reported no attrition. This analysis was done to discover if attrition rates for either group had an affect on the overall outcomes of the study. Those who do not complete or opt-out of the study may be at a higher risk for recidivism. Groups can become different because of the people dropping out rather than just the treatment.

Implications

The methodology for the current work differs from the previous meta-analysis in three distinct ways. First, one-group research designs were excluded. Changes between pre-and post-test may be due, not to the treatment, but to history, maturation, data collection characteristics, data collection bias, testing, attitude of subjects, problems with implementation, and so forth. Thus, only experimental and quasi-experimental research designs were included for these reasons. Second, the current work excluded multiple studies using the same sample. For instance, Cosden et al., 2003 & 2005 appeared to use the same sample in both studies. These types of studies were included in the previous meta-analysis (Sarteschi, 2009). This meta-analysis includes the most recent work by the author. In the example given, the Cosden et al., 2005 article was used. Finally, the current study employed email inquiry to authors with known studies, but there was no

access through academic databases or Internet searches (i.e. paper presented at conferences). The previous study sent out 129 emails to mental health courts across the country for unpublished evaluations. The search yielded 2 usable studies for that meta-analysis both being one-group research designs. The current study did not email existing mental health courts in the country due to time constraints and previous work indicating a lack of usable evaluations.

Summary

This chapter described the methods that were used to access both peer-reviewed and non-peer-reviewed MHC studies. A comprehensive and thorough literature search was also conducted to gather existing MHC evaluations from the years 1997 to 2011. This approach generated a total of 20 studies that were included in this analysis on recidivism and clinical outcomes. Also described in this chapter was a summary of the coding forms, how the effect sizes were coded, the statistical analysis of the effect sizes, and which moderator analyses were conducted. Each study was assessed utilizing the Maryland Scale of Scientific Methods (MSSM). The next chapter describes the statistical results of the quantitative analysis for this study.

Chapter Five

Results

The objective of this chapter is to describe study characteristics and present the results from this meta-analysis. This chapter specifically highlights a description of the studies examined, characteristics of the participants within the studies, the results of the effect size analysis, and finally the findings from the moderator analyses.

Table 1 indicates the possible number of studies screened for inclusion in the meta-analysis, reasons for excluded studies, and finally a total of the number of studies included in the analysis. There were 45 studies examined from academic databases, Internet searches, and email inquiry. Of those studies, 25 were excluded for various reasons including they were qualitative in nature, one-group research designs, cost-analysis, etc. The search yielded 20 studies that met criteria for the current research.

Table 1. Summary of Article Reviewing and Screening Process

Source of Identification	Reason for Exclusion	Articles Included
Possible studies identified and screened for retrieval through academic databases up to April 9, 2011: Total (n=30)	Excluded Articles: Trials excluded for being a literature review, cost effectiveness study, qualitative analysis, not enough information to compute effect sizes, or a national stakeholder survey. Total (n= 16)	Included in analysis (n=14)
Possible studies identified and screened for retrieval through internet searches up to April 9, 2011: Total (n=10)	Excluded Articles: Not enough information to compute effect sizes or regarding other jail diversion programs. (n=6)	Included in analysis (n=4)
Possible studies identified and screened for retrieval through hand searches and email inquiry up to April 9, 2011: Total (n=5)	Excluded Articles: One-group research design. (n=3)	Included in analysis (n=2)
Total number of studies included in analysis: (n=20)		

Characteristics of the Studies

The characteristics of the studies included in the meta-analysis are depicted in Table 2. The majority of studies were found from academic databases (70%). More than half of the studies were from 2005 to 2010 and there were none written prior to the year 2000, mainly because mental health courts were not instituted until the late 1980s. All of the studies in this analysis were conducted in the United States. Studies outside the United States were not included because their criminal justice and public health system were believed to be dissimilar to the United States. There were two multi-site studies examined from Trupin & Richards, 2003 and Steadman, Redlich, Callahan, Robbins, & Vesselinov, 2010. The former study focused on two sites in Washington State. The latter study included four sites including San Francisco, CA, Santa Clara, CA, Hennepin County, MN, and Marion County, IN. Finally the majority of the studies were quasi-experimental designs. There were two studies that were true random assignment experimental studies (Bess, 2004; Cosden et al., 2005).

Table 2. Characteristics of Studies Included in Meta-Analysis (N=20)

Characteristic	Frequency (%)
Publication type Published journal article Thesis/ dissertation	19 (95%) 1 (5%)
Publication year 2008-2010 2005-2007 2003-2004 2000-2002	7 (35%) 7 (35%) 5 (25%) 1 (5%)
Age Over 17	20 (100%)
Methodological Quality Reported baseline characteristics	16 (80%)
Outcome follow-up length Less than 6 months 6-12 months 13 months or longer Cannot tell	0 (0%) 11 (55%) 6 (30%) 3 (15%)
Single site studies Multisite studies	18 (90%) 2 (10%)
Study design Experimental Quasi-experimental	2 (10%) 18 (90%)

The majority of the studies did not report if they received funding. Three studies (Boothroyd et al, 2003; Boothroyd et al., 2005; Steadman et al., 2010) reported being funded by grants from the John D. and Catherine T. MacArthur Foundation. McNeil & Binder (2007) reported funding from the University of California, San Francisco, and the Academic Senate Committee on Research and the San Francisco Mayor's Office on Disability. Finally, one study (Ferguson et al., 2008) reported receiving grant support from The Alaskan Mental Health Trust Authority. The lack of sufficient funding could be a possible reason that there are so few evaluations complete on mental health courts.

Assessing the methodological quality of each study is subjective. Factors that went into scoring a study as "low" quality were whether they differentiated between the control group on "completers" and "non-completers", "opt-in" versus "opt-out", or if there was a judge's bias of knowing the client's medical history. This bias could guide them to choose clients who would have a better chance for success within the program.

There was not a lot of information regarding court characteristics for each study. Two studies indicated the courts accepted misdemeanors only (Christy et al., 2005; Trupin & Richards, 2003) while the remaining accepted both misdemeanors and felonies. The majority of defendants could enter the mental health court either preadjudication or postadjudication. These were two common characteristics mentioned in the studies; however, information such as, length of treatment, what services were received for treatment, or how often participants made court appearances was absent. More information for recidivism outcomes regarding study descriptions, the nature of the treatment and control groups, and attrition are provided in Table 3 for recidivism studies and Table 4 for clinical studies.

Table 3. Summary of Study and Intervention Characteristics for Recidivism Outcomes

Author, Date	Study Design	Attrition: At least 10%	Treatment Group Intervention	Nature of Control Group	Prior Criminal History Between Groups and Court Characteristics
Bess, 2004	Experimental- random assignment	Yes	<ul style="list-style-type: none"> • Team approach • Quick treatment response • Intensive treatment services • Medication management • Employment counseling • Substance abuse counseling 	<ul style="list-style-type: none"> • TAU • Community's standard of care 	<ul style="list-style-type: none"> • Included nonviolent felony or misdemeanors. • Assessed up to 36 months prior to study enrollment • No significant differences between groups
Christy et al., 2005	Quasi- experimental	Yes	<ul style="list-style-type: none"> • Treatment not specified 	<ul style="list-style-type: none"> • Matched control group • Treatment not specified 	<ul style="list-style-type: none"> • Prior criminal history assessed, no significant differences • Misdemeanor offenses
Cosden et al., 2005	Experimental- random assignment	No	<ul style="list-style-type: none"> • Decisions made by team • Intensive court supervision and drug testing • Charges dropped or probation reduced upon completion • Case manager with 1:15 client ratio • Section 8 housing • Transportation • Group skills training on substance abuse and community re-entry • ACT model approach • Skill building workshops • Vocational program 	<ul style="list-style-type: none"> • TAU • Decisions made by judge • Regular court supervision and sentencing • Same judge as MHC group • Case manager with 1:50 client ratio • Waitlist for Section 8 housing • Dept. of Rehabilitation 	<ul style="list-style-type: none"> • No significant differences between groups

				Programs <ul style="list-style-type: none"> • Other county programs 	
Dirks-Linhorst & Linhorst, 2010	Quasi-experimental: post-test one year after discharge	No	<ul style="list-style-type: none"> • Treatment not specified 	<ul style="list-style-type: none"> • “Opt-out” participants 	<ul style="list-style-type: none"> • Lower level misdemeanor crimes • Does not fund or provide mental health services, refers • Prior criminal history assessed, no significant differences
Frailing, 2010	Quasi-experimental	Yes	<ul style="list-style-type: none"> • Outpatient psychiatric and psychology treatment • Substance abuse treatment • Supported living 	<ul style="list-style-type: none"> • Declined to participant “opt-out” or other disposition 	<ul style="list-style-type: none"> • No significant difference between groups • Charges included: drug, property, person, or community • Majority of participants had felonies (N=94) for both groups
Ferguson et al., 2008	Quasi-experimental	No	<ul style="list-style-type: none"> • Trauma-sensitive services • Substance abuse services • Life skills services 	<ul style="list-style-type: none"> • Referred, but opted out 	<ul style="list-style-type: none"> • Misdemeanor offenses • Statistical test for difference in clinical diagnoses • No significant differences between groups on prior criminal history

Hiday & Ray, 2010	Quasi-experimental	No	<ul style="list-style-type: none"> Completed the program Treatment not specified 	<ul style="list-style-type: none"> Opted out or ejected from the program 	<ul style="list-style-type: none"> Prior criminal history not assessed
McNeil & Binder, 2007	Quasi-experimental	Yes	<ul style="list-style-type: none"> Treatment not specified 	<ul style="list-style-type: none"> TAU- not specified Matched sample 	<ul style="list-style-type: none"> No significant differences between groups
Moore & Hiday, 2006	Quasi-experimental	No	<ul style="list-style-type: none"> Treatment not specified 	<ul style="list-style-type: none"> TCC- traditional criminal court Would have been eligible, but the judge's knowledge of the defendant opted not to select them for the treatment group Matched sample 	<ul style="list-style-type: none"> No significant differences between groups
Morin, 2004	Quasi-experimental	No	<ul style="list-style-type: none"> Medication management Day treatment programming for mental illness and/or chemical dependency Traumatic brain injury services Continuing education Case management Representative payee services Housing Vocational and social services Probation Assistance with disability funding 	<ul style="list-style-type: none"> Matched control group Treatment not specified 	<ul style="list-style-type: none"> No statistical significant test for prior criminal history
Neiswender,	Quasi-	No	<ul style="list-style-type: none"> Faster case processing time 	<ul style="list-style-type: none"> Eligible, but "opted 	<ul style="list-style-type: none"> No significant

2005	experimental		<ul style="list-style-type: none"> Improved access to public mental health treatment services Intense level of supervision Welfare/living arrangements Medication management 	<p>out”</p> <ul style="list-style-type: none"> Treatment not specified 	<ul style="list-style-type: none"> difference between past violent offense Misdemeanor and felonies accepted
Steadman et al., 2010 a	Quasi-experimental	No	<ul style="list-style-type: none"> Treatment not specified 	<ul style="list-style-type: none"> TAU- outpatient treatment, medication management, and case management Eligible, but never enrolled Matched sample 	<ul style="list-style-type: none"> Both groups were compared on prior criminal history for crimes against person, property, drug, or minor, no significant differences found
Steadman et al., 2010 b	Quasi-experimental	No	<ul style="list-style-type: none"> Treatment not specified 	<ul style="list-style-type: none"> TAU- outpatient treatment, medication management, and case management Eligible, but never enrolled Matched sample 	<ul style="list-style-type: none"> Both groups were compared on prior criminal history for crimes against person, property, drug, or minor, no significant differences found
Steadman et al., 2010 c	Quasi-experimental	No	<ul style="list-style-type: none"> Treatment not specified 	<ul style="list-style-type: none"> TAU- outpatient treatment, medication management, and case management Eligible, but never enrolled Matched sample 	<ul style="list-style-type: none"> Both groups were compared on prior criminal history for crimes against person, property, drug, or minor, no significant differences found
Steadman et al., 2010 d	Quasi-experimental	No	<ul style="list-style-type: none"> Treatment not specified 	<ul style="list-style-type: none"> TAU- outpatient treatment, medication management, and case management Eligible, but never 	<ul style="list-style-type: none"> Both groups were compared on prior criminal history for crimes against person, property,

				<ul style="list-style-type: none"> enrolled Matched sample 	<ul style="list-style-type: none"> drug, or minor, no significant differences found
Trupin & Richards, 2003 a	Quasi-experimental	No	<ul style="list-style-type: none"> Treatment not specified 	<ul style="list-style-type: none"> Opt-out participants 	<ul style="list-style-type: none"> Prior criminal history not assessed Misdemeanor offenses
Trupin & Richards, 2003 b	Quasi-experimental	No	<ul style="list-style-type: none"> Treatment not specified 	<ul style="list-style-type: none"> Opt-out participants 	<ul style="list-style-type: none"> Prior criminal history not assessed Misdemeanor offenses
Trupin et al., 2001	Quasi-experimental	No	<ul style="list-style-type: none"> Psychiatric treatment Substance abuse services Community mental health centers Housing 	<ul style="list-style-type: none"> Characteristics not specified 	<ul style="list-style-type: none"> Test of significance between groups, no significant difference

Table 4. Summary of Study and Intervention Characteristics for Clinical Outcomes

Author, Date	Study Design	Attrition	Treatment	Control	Clinical Diagnoses	Group Differences
Bess, 2004	Experimental-random assignment	Yes	<ul style="list-style-type: none"> • Team approach • Quick treatment response • Intensive treatment services • Medication management • Employment counseling • Substance abuse counseling 	<ul style="list-style-type: none"> • TAU • Community's standard of care 	<ul style="list-style-type: none"> • Must have: • Schizophrenia • Psychotic disorders • Mood disorders • Dissociative disorders 	<ul style="list-style-type: none"> • No significant differences between groups
Boothroyd et al., 2005	Quasi-experimental	Yes	<ul style="list-style-type: none"> • Relies on the system of community providers to determine, prescribe, and monitor the appropriate clinical services 	<ul style="list-style-type: none"> • Nonequivalent comparison group design • Matched to a group of defendant from a misdemeanor court in another county 	<ul style="list-style-type: none"> • Schizophrenia (17%) • Bipolar disorder (24%) • Major depression (25%) • Other (34%) • No diagnoses for control group were available 	<ul style="list-style-type: none"> • No significant differences between groups
Boothroyd et al., 2005	Quasi-experimental	Yes	<ul style="list-style-type: none"> • Referrals to specific community agencies • Court did not explicitly commit court resources to assist in making linkages to treatment. 	<ul style="list-style-type: none"> • Treatment not specified • Matched groups 	<ul style="list-style-type: none"> • Not specified 	<ul style="list-style-type: none"> • No significant differences between groups

Cosden et al., 2005	Experimental-random assignment	No	<ul style="list-style-type: none"> • Decisions made by team • Intensive court supervision and drug testing • Charges dropped or probation reduced upon completion • Case manager with 1:15 client ratio • Section 8 housing • Transportation • Group skills training on substance abuse and community re-entry • ACT model approach • Skill building workshops <p>Vocational program</p>	<ul style="list-style-type: none"> • TAU • Decisions made by judge • Regular court supervision and sentencing • Same judge as MHC group • Case manager with 1:50 client ratio • Waitlist for Section 8 housing • Dept. of Rehabilitation Programs • Other county programs 	<ul style="list-style-type: none"> • Mood disorder • Schizophrenia/psychosis • Bipolar disorder • Other- Post Traumatic Stress Disorder and anxiety disorders • 83% of participant reported dual substance abuse and mental illness 	<ul style="list-style-type: none"> • No significant differences between groups
Ferguson et al., 2008	Quasi-experimental (Graduates, opt-out, comparison group)	No	<ul style="list-style-type: none"> • Trauma-sensitive services • Substance abuse services • Life skills services 	<ul style="list-style-type: none"> • Referred, but opted-out 	<ul style="list-style-type: none"> • Schizophrenia • Psychotic disorder • Bipolar disorder • Major depressive disorder 	<ul style="list-style-type: none"> • No significant differences between groups

Study Participant Characteristics

Table 5 presents the descriptive characteristics for the participants included in this meta-analysis. Information includes, number of participants in the study, age, gender, and race where applicable. The n's for each study were the n's used in the recidivism analysis (i.e. after missing data and attrition). The n's for the clinical analysis were computed the same way.

Overall, there was little variability among the studies in regard to age, sex, or race. The majority were white males in their mid-thirties. These findings are similar to the first meta-analysis (Sarteschi, 2009). There were three studies that did not test for statistical significance relating to prior criminal history for participants. All studies reported some level of diagnoses for participant in the treatment group. However, much of the data was incomplete. The majority of studies identified specific diagnoses as schizophrenia, bipolar disorder, depression, or other (Cosden et al., 2005; McNeil & Binder, 2007; Steadman, 2009). Frailing (2010) characterized diagnoses as thought disorder, mood disorder, or anxiety disorder for his study's participants. There were three studies that included personality disorders and learning and developmental disorders (Bess, 2004; McNeil & Binder, 2007; Morin, 2004) however, they comprised less than 20% of the total participants.

There are different characteristics for those who "opt-in" or "opt-out" of each mental health court. In general, those with personality disorders are more likely to initially opt-in to a program. Older individuals, though eligible, tend to not consider mental health court and opt-out. Those who graduate are more likely to adhere to treatment and actively participate in courtroom discussions. Participants who do not

graduate from the program tend to have personality disorders, bipolar disorder, or substance abuse disorders. This group is also more likely to recidivate and not seek treatment.

There was no discussion of the reasons participants opted-in or opted-out of any study. This is an issue because those who choose to participate could already bias the results in favor of the treatment group. Participants who seek treatment and are self-motivated already have the desire to complete the program and have better outcomes than those who opt-out.

It should be noted that the majority of studies did not detail how participants were diagnosed. They did not state whether the participant came into the study with a prior diagnosis or if a court ordered psychiatrist or a jail psychiatrist diagnosed them. There was very little information within these studies to capture how the participants were diagnosed formal conclusions could not be made.

Table 5. Study Participant Characteristics

Author	Year	N*	Age**		Gender**		Race**	
			MHC	Control	MHC	Control	MHC	Control
Bess	2004	44	32.2	35.5	50/50	50/50	>50%	>50%
Boothroyd et al.	2003	213	38	38	68.10%	41.20%	>50%	>50%
Boothroyd et al.	2005	217	36.4	37.7	68%	60%	>50%	>50%
Christy et al.	2005	217	36.36	37.66	66%	60%	>50%	>50%
Cosden et al.	2005	235	N/G	N/G	49%	52%	>50%	>50%
Dirks-Linhorst &	2010	577	36.20	N/G	>50% male	N/G	< 50%	N/G
Ferguson et al.	2005	305	59.9% over 31	N/G	>50%	>50%	>50%	>50%
Frailing	2010	324	N/G	N/G	50/50	>50% male	< 50%	< 50%
Hiday & Ray	2010	99	75% over 25	N/G	72%	N/G	>50%	>50%
McNeil & Binder	2007	8237	37.30	37.90	74%	78%	>50%	>50%
Moore & Hiday	2006	265	36	30	68%	73%	>50%	< 50%
Morin	2004	102	39.80	29.04	75%	N/G	< 50%	>50%
Neiswender	2005	194	40.02	43.53	70%	75%	>50%	>50%
Steadman et al. (SF) a.	2010	254	37.5	39.8	72.2%	74.7%	>50%	>50%
Steadman et al. (SC) b.	2010	334	38.1	34.7	55.1%	61.1%	>50%	>50%
Steadman et al. (MN) c.	2010	248	38.1	38.0	53.8%	67.1%	>50%	>50%

Steadman et al. (IN) d.	2010	211	36.3	34.0	51.5%	33.9%	>50%	>50%
Trupin & Richards (K) a.	2003	77	37.6	N/G	>50% male	>50% male	>50%	>50%
Trupin & Richards (S) b.	2003	147	38.57	N/G	>50% male	>50% male	N/G	>50%
Trupin et al.	2001	94	38	38	>50% male	>50% male	>50%	>50%

Note: MHC= mental health court; 50/50 in the gender column= approximately 50% male and 50% female; >50% in the race column= >50% of the participants were white; N/G= not given; *denotes N after attrition; **denotes tallies based on participant baseline characteristics; % in gender column= percentage of males within each study, SF= San Francisco, SC= Santa Clara, MN= Minnesota, IN= Indianapolis, K= King County, S= Seattle.

Intervention and Services

A drawback to many of these studies is that they did not detail the nature of the services received by the participants in the mental health court (see Table 3). There was a lack of information regarding how the courts operate on a daily basis. There were however studies that used court observations to give a picture of the processes and judge-client interactions. Frailing (2010) observed ten court sessions for one mental health court and reported the daily operations and exchanges that occurred. Moreover, there were other studies (Bess, 2004; Cosden et al., 2005; Ferguson et al., 2008) that reported detail operations of the court. Without the reporting of what type of mental health services participants are referred to, it cannot be known how the intervention truly works. Knowing if they were community-based services, how often they could receive them, or what types of services were offered to the various courts would help to discover which aspects of mental health courts work, for which services, and could make commonalities between them.

For the studies that did report information about the services received, or for the length of time they received them, the following description and list was compiled. Mental health court participants receive customized services based on their specific needs. The services are guided by a care plan designed by the mental health court team and overseen by the case manager assigned to the client. The range and depth of services provided varied among mental health court participants, though their cases were reviewed at least once a week at team meetings. The length of time that mental health court clients participate in each program varies based on their specific needs and the collective judgment of treatment team members. As a rule, “graduated” participants were

approximately 12 months in the program. The range of services varied and included, though was not limited to, clinical counseling, case management, alcohol and substance abuse treatment, money management education, employment counseling, entitlement program consultations, and self-help and support groups.

For those studies that reported the control group as TAU it was rarely described what the usual treatment for the defendant was. Bess (2004) used a comparison group that received the community's "standard of care." This would mean, for example, that clients would be eligible for services based on such factors as availability, personal motivation, court-ordered compliance, or other voluntary and/or mandated requirements that would be the natural part of a client's adjudication process. Steadman and colleagues (2010) described the control group as receiving outpatient treatment, case management, and medication management. Clearly, how each court defines the types of treatments available and the selection criteria for the mental health court and control groups are vastly different.

Participants with co-occurring disorders are significantly less likely to graduate from the mental health court compared to those with mental health disorders alone (Ferguson et al., 2008). This is not surprising, as people with co-occurring disorders are among the most difficult to diagnose, treat and generally tend to have worse outcomes (Peter & Hills, 1997). In general, they are at greater risk of relapse, re-hospitalization and homelessness, and tend to be more involved with the criminal justice system (Peters & Osher, 2004).

Effect Size Analysis

The two major outcomes examined in this meta-analysis were recidivism and clinical outcomes. When effect sizes are reported positive values indicate positive outcomes (i.e. a reduction in recidivism). Table 6 summarizes the effect size analysis.

Table 6. Summary of Effect Size Calculations

Analysis	Type of Outcome	ES	CI	p	Q	df
Mean ES	Recidivism	0.32	0.12, 0.51	0.000*	150.24**	17
	Clinical	-0.09	-0.38, 0.19	0.51	17.73**	4

Note. Positive values indicate positive outcomes, ES= mean effect size, CI= confidence interval, z= z-value for effect size, p= p-value for effect size, Q= heterogeneity Q-value, df= degrees of freedom associate with the Q, * denotes p-value is statistically significant at the 0.05 level, **denotes Q-value is statistically significant at the 0.001 level.

Recidivism Outcomes

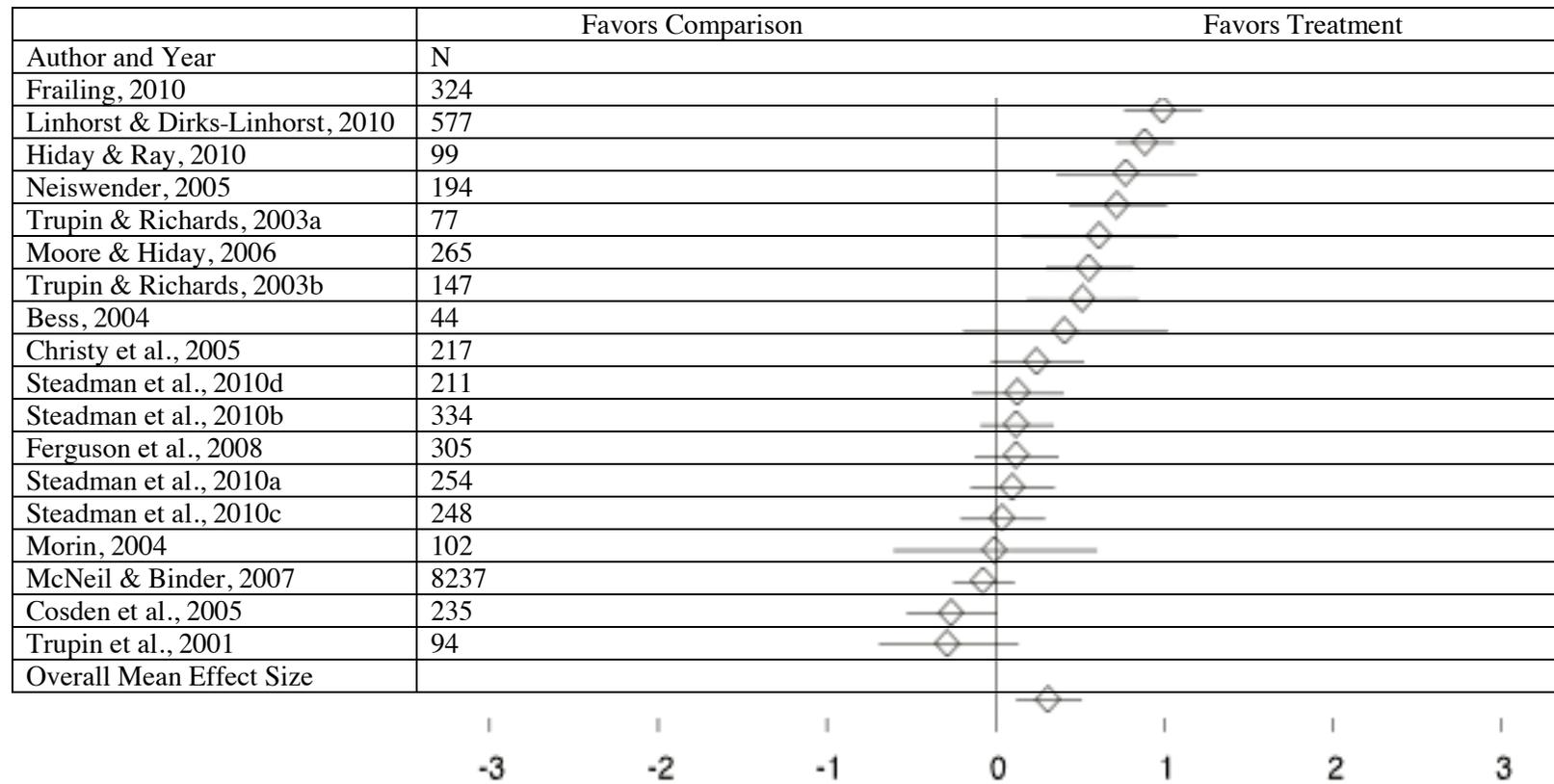
The strongest test of criminal justice diversion programs is the extent to which they actually reduce crime. Although, in general, research on adult drug court programs have shown reductions in criminal activity among program graduates, it has been more difficult for researchers to draw meaningful conclusions about such outcomes for mental health courts. Mental health courts are more recent, typically have had far fewer enrollments, and are strategically more difficult to research given the high degree of confidentiality – and in many cases inaccessibility – of the mental health treatment records that are essential in developing viable comparison groups from which to assess program outcomes (Ferguson et al., 2008).

As a result of these problems, there have been relatively few evaluations of mental health court programs nationally. Among the evaluations that have been conducted, few include analyses of post-program recidivism, incorporate an experimental design, or use multivariate models to assess program outcomes. Nevertheless, these studies have been suggestive of reduced criminal justice system involvement, whether measured by booking rates, days in jail, arrests, or type of involvement (Moore & Hiday, 2006; Trupin & Richards, 2003). The results of this meta-analysis attempt to aggregate the available studies to assess recidivism outcomes, which are provided below.

There were a total of 18 studies included in the recidivism analysis. The effect size using the random effect model was statistically significant for recidivism (0.32 (95% CI 0.12, 0.51), $p < .001$). The statistical test for heterogeneity was highly significant ($Q=150.24$, $df=17$, $p < .001$) indicating that there was a considerable amount of variation among the studies different from sampling error.

This effect size, based on guidelines from Cohen's d (1988) would be interpreted as small to moderate. Thus, mental health courts have a small to moderate effect in reducing recidivism for participants with serious mental illness in the criminal justice system. Fourteen studies reported positive effect sizes for reducing recidivism. Two studies had very large positive effect sizes, greater than 0.8 (Dirks-Linhorst & Linhorst, 2010; Frailing, 2010) and one study (Cosden et al., 2005) had a moderate negative effect size of -0.26 ($p < .05$). The majority of effect sizes clustered around 0.25, a small effect.

Figure 1. Recidivism Outcomes Forest Plot

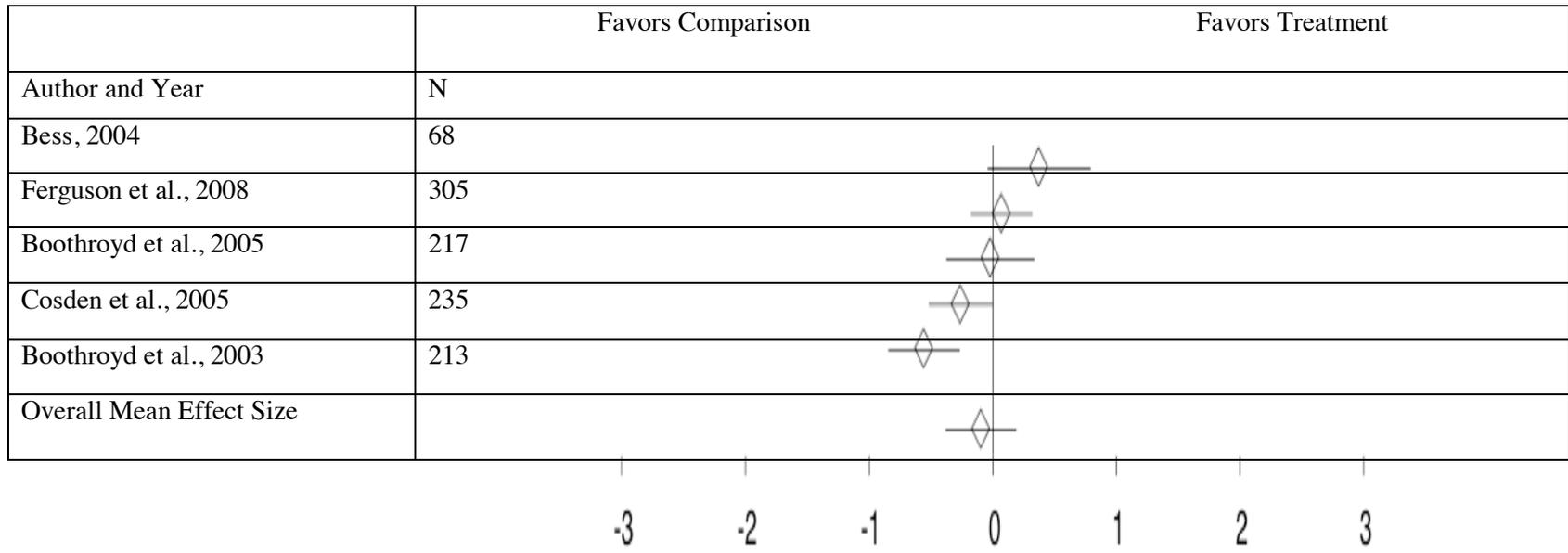


Clinical Outcomes

One of the goals of mental health courts is to reduce the amount of time participants spend institutionalized, whether time spent incarcerated or in a psychiatric institution. Among the studies of mental health courts, most show reductions in jail days, but are more mixed in terms of demonstrating any improvements along clinical outcome measures (Bess, 2004; Boothroyd et al., 2005; Cosden et al., 2005; Ferguson et al., 2008). Thus far, there has been an examination of the criminal justice outcomes of participants and now we turn to an examination of their clinical outcomes.

There were a total of five studies that used adequate measures of clinical outcomes for this meta-analysis. The outcomes could have been operationalized by using established measures such as the BASIS-32, BPRS, or GAF, or could have been reported as hospitalization days or psychiatric visits. The effect size using the random effects model was -0.09 (95% CI -0.38, 0.19), $p=0.51$. This effect size is nonsignificant and the direction of the effect size is contrary to what would be expected- those defendant that received treatment had worse clinical outcomes than those who did not receive mental health court treatment. The statistical test for heterogeneity was found to be highly significant ($Q=17.73$, $df=4$, $p<.001$). This finding was significant, but due to the lack of a robust sample, should be interpreted with caution. More studies assessing clinical outcomes for both treatment and control groups are necessary.

Figure 2. Clinical Outcomes Forest Plot



Moderator Analysis for Recidivism Outcomes

There were several moderator analyses done. Table 6 is a summary of the various moderator analyses. The first was based on methodological quality. Those studies that were identified as “high” quality scored a 4 or above on the MSSM and those were considered “low” quality scored a 3 or below on the MSSM. Using MSSM guideline for appropriate methodological quality, these two categories were formed to assess methodological quality. The effect size for high quality studies was 0.32 (95% CI 0.10, 0.55), $p < .05$. The statistical test for heterogeneity was not significant. Low quality studies had an effect size of 0.30 (95% CI 0.01, 0.60), $p < .05$. The statistical test for heterogeneity between these two groups was not significant. The moderator analysis shows that the difference between high and low quality studies was not significant and therefore most likely not a moderating effect.

There was an additional analysis done using methodological quality as a moderating variable for experimental studies. To date there have only been two experimental studies to assess the effectiveness of mental health court interventions. The two true experiments in this analysis had contradicting results. Cohen and colleagues (2005) had an effect size of -0.26, indicating participants had a small to moderate increase in recidivism when in the mental health court intervention. This study measured recidivism as rearrests. Bess (2004) had an effect size of 0.42, which is medium effect in reducing recidivism for participants. This study measured recidivism as booking rates. Using the MSSM as a moderator between these two experimental studies, the effect size - 0.001 (95% CI -0.55, 0.55), $p = 0.99$ was not statistically significant. More experimental studies are necessary to examine these outcomes and lend more support to this area of the

literature. Without additional experimental studies, it is not known whether these interventions support a reduction in criminal activities or improvement in clinical outcomes because of the mixed results.

The second moderator analysis was done by publication type. There were two categories, published and unpublished studies. The effect size for published was 0.31 (95% CI 0.12, 0.50), $p < .001$ and the effect size for unpublished was 0.36 (95% CI -0.15, 0.87), $p = 0.162$. The statistical test for heterogeneity between these two groups was not significant; therefore publication type is not a potential moderator.

The third moderator analysis was done by the nature of the control group. The control group was either TAU-matched or Opt-out participants. These two groups were found to be statistically significant ($Q = 22.33$, $p < .001$). This finding indicates that the nature of the control group could have a moderating effect.

There were 15 studies included in this moderator analysis. Of those studies, seven included a comparison groups comprised of individuals who opted-out of the mental health court intervention. These studies could have a potential bias in favor of the treatment group, as those who choose to participate are more motivated and create more positive outcomes for the study. Those studies with a comparison group of opted-out individuals are considered methodological weak compared to the TAU-matched sample comparison groups. The results of this analysis show that those studies with opted-out individuals have a significantly higher effect size (0.67, $p < .001$) than those with TAU-matched sample comparison group effect size (0.11, $p = .241$). This indicates that methodologically weaker studies have higher effect sizes, thus supporting the mental health court intervention more so than stronger methodological quality studies.

Investigation into why participants choose to opt-in or opt-out of a study is worth future exploration.

The final analysis completed was if the sample in the study experienced at least 10% attrition. There either was recorded attrition for either group or there was not. The studies that recorded attrition had an effect size of 0.39 (95% CI 0.01,0.77), $p < .05$ and the studies that did not experience attrition had an effect size of 0.30 (95% CI 0.09, 0.50), $p < .05$). The statistical test for heterogeneity between these two groups was not significant; therefore whether the study accounted for attrition is not a potential moderator.

Table 7. Summary of the Moderator Analyses for Recidivism Studies

Analysis	Type of Outcome	ES	CI	p	Q between	df
ES Recidivism by Methodological Quality	High Quality	0.32	0.10, 0.55	0.005*	2.05	6
	Low Quality	0.30	-0.01, 0.60	0.043*		10
ES Recidivism by Publication Type	Published	0.31	0.12, 0.50	0.001*	0.04	14
	Unpublished	0.36	-0.15, 0.87	0.162		2
ES Recidivism by Control Group TAU-matched sample or "Opt-Out" Participants	TAU- matched	0.11	-0.07, 0.288	0.241	22.33**	7
	Opt-Out	0.67	0.472, 0.869	0.000*		6
ES Recidivism by Attrition or No Attrition for Study Samples	Attrition	0.39	0.01, 0.77	0.042*	0.25	3
	No Attrition	0.30	0.09, 0.50	0.004*		13

Note. * denotes p-value is statistically significant at the 0.05 level; ** denotes Q between is statistically significant at the 0.05 level; df= degrees of freedom associated with Q statistic.

Summary

This chapter presented results from a meta-analysis for twenty studies. Specifically, study characteristics, participant characteristics, and the intervention and services participants had access to. The findings in this study indicate that mental health courts have a small to moderate effect on reducing recidivism for participants with serious mental illness in the criminal justice system. Clinical outcomes were not found to be affected by mental health court participation. In addition, four moderator analyses were done and found that the nature of the control group could potentially have a moderating effect. The next chapter discusses these results in depth.

Chapter Six

Discussion

The results of this meta-analysis indicate mental health courts have a small to moderate positive effect on reducing recidivism for those participants with serious mental illness in the criminal justice system. The findings of the majority of individual studies show they have been successful in reducing recidivism. This study presents meta-analytic data to add to the growing body of literature for mental health courts. The following chapter presents a discussion of this study's findings and incorporates it into the current literature. The chapter concludes with implications, limitations, and suggestions for future research and continuing meta-analyses.

The findings presented in this paper represent a meta-analytic study of mental health courts. Only one meta-analysis was conducted previously and years have passed since the cessation of article collection. This review analyzed all of the available mental health court studies from both peer-reviewed and non-peer reviewed sources that could contribute an effect size. Both recidivism and clinical outcomes are discussed below.

An empirical question this paper sought to address was whether mental health courts were effective in reducing recidivism for its participants. When analyzed recidivism had a mean effect size of 0.32 ($p < .001$). This indicates that mental health courts have a small to moderate (Cohen, 1988) effect on decreasing recidivism among its participants in comparison to those who did not participate in the intervention. This study lends support to the idea that mental health court participants were significantly

less likely to recidivate than non-participants. Since one of the fundamental goals of all mental health courts is to reduce recidivism, thus protecting the public, this finding lends support for the progression and sustainability of these courts in the United States.

The results from the clinical outcome for this study were nonsignificant and more important, in the opposite direction of the goal of the mental health courts. This could be due to the lack of a robust sample as only five studies were included. This could also be due to inadequate services provided by the public health system, where it's not the failure of the mental health court, but the failure of the public health system. This finding is noteworthy and does not support the idea that mental health courts improve clinical outcomes for its participants.

These results should be interpreted with the following thought in mind. The overall results for recidivism show a small to moderate reduction for those with SMI in the criminal justice system. However, the studies where the nature of the control group was identified as methodologically weak had significantly higher effect sizes than those that were considered stronger methodologically. This unearthed the idea of whether the more rigorous studies were not finding support for mental health courts while the weaker studies were finding support. Thus, arises the question of whether the research design or methodological quality has an impact on the outcomes for the study? These results lend support that the design and quality do have an impact on the outcomes for a study. Future research in this area is warranted to assess the effectiveness of the mental health court intervention.

In addition to the research design and methodological quality impacting the outcomes of a study, these results should be interpreted with the following cautions in

mind. It should be noted that only two of the studies were experimental. These two studies reported opposite findings one showing a significant reduction in recidivism for the treatment group while the other finding no difference in recidivism between groups. Quasi-experimental trials comprised over 90% of the research designs. It is possible that because the comparison groups were often comprised of individuals who opted out of participation there was a bias favoring the mental health court group. For instance, in the Moore and Hiday, 2006 study, a judge who had knowledge of the community and the treatment history of many of the individuals who presented in court chose participants for the mental health court. This meant that individuals who may not have done as well in the mental health court were diverted to the traditional court process. In this instance, an unknown bias may have been present.

Further attention needs to be given to assess the idea as to why certain participants opted to participate in the program and the characteristics of those who opted out. This idea could not be empirically assess because there was not enough information reported in the studies (Sarteschi, 2009). There were, however, several authors who discussed the characteristics of individuals in greater detail who opted not to participate in the mental health court program. One being Neiswender (2005) that observed the main reason participants opted out of the intervention was because they did not believe they needed mental health treatment. In addition, Moore and Hiday (2006) reported that one third of the mental health court defendants did not complete the program and were sent back to the traditional criminal court condition, mostly due to noncompliance. They were unable to detect a significant difference in demographic or criminal history variables between those who completed the program and those who did not.

It would be interesting to discover more about the reasons individuals chose not to participate in the mental health court program. A possible explanation is stigma associated with mental illness. In the Polk County mental health court the participant refused the first time because he believed he didn't have mental health problems. When he heard it was called behavioral health, he opted into the program. Among individuals with a severe mental illness the stigma is relatively common. They often blame themselves, which has a negative effect and disrupts their treatment. Those that do chose to participate may already be "self-motivated" and willing to seek treatment.

The choice to receive or not to receive treatment is not always the decision of the seriously mentally ill individual. The attending staff will evaluate those who are hospitalized, often against their will, and who refuse treatment. Medications and hospitalization may be forced upon the client (Fenton, Blyler, & Heinssen, 1997). It can be that the evaluation team concludes that the client is mentally ill and as such is not capable of making a sound judgment regarding their treatment. The assumption by which medical treatment is forced upon the client against their will is that the best interest of the client cannot be carried out without medical treatment. It is the debate that if the client were less ill, they would likely choose treatment (Pyne, Bean & Sullivan, 2001). In the mental health court studies cited, many individuals with an SMI chose not to participate or became non-compliant. The obvious question becomes: was it in the best interest of the individual to reject court directed therapy? Were the individuals capable of making decisions that would be in their best interest, or did their illness prevent them from doing so? Perhaps individuals who chose not to participate or became non-compliant did so only because they were too ill to make sound judgments or to comply (Sarteschi, 2009).

“Success” in a therapeutic court can be defined and measured in a variety of ways. While the ideal situation is one where a client receives appropriate treatment, graduates from the program, and does not re-offend, the reality of therapeutic courts is that many participants do not follow such a straight path; many clients need more than one attempt at success, while others will never graduate but may still be able to achieve some form of success in terms of their mental illness or offending status (Ferguson et al., 2008).

“For example, consider a person who, without proper medication, has violent outbursts as a symptom of a severe mental illness. Now imagine if this person enrolled in a mental health court and was able to receive appropriate treatment, especially in regard to medication management, but was unable to successfully complete the program. Soon after release from the program, this person is charged with a minor, non-violent offense, such as loitering, but has maintained the medication management schedule learned from the mental health court. Based on the current evaluations of mental health courts, this person would technically be considered a “failure” because of the re-offense” (Ferguson et al., p. 37, 2008).

It can be argued that the court was able to successfully help a previously violent offender receive needed treatment, and while a new crime was committed, it was not of the serious nature that originally brought the person into the mental health court. So again, it begs the question, what is “success?” It depends in the individual, yet research focuses on, as a whole, those who “completed” the program verses those who did not.

Intervention and Services

Unfortunately, there was not enough descriptive information to gain specific details about the services offered for all of the mental health court programs studied. But among

the studies that did provide this information, their authors commented on the fact that the quality of services being offered to the participants may have made a difference in whether the intervention was successful. Boothroyd and colleagues (2005) did not find significant differences between their two groups on clinical outcomes but the authors speculated that if there had been better mental health services available there may have been a significant difference in clinical outcomes between the treatment and comparison groups.

Substance abuse was found to be a possible explanation for non-compliance. Participants who suffer with SMI and co-occurring substance abuse related disorders are believed to comply with treatments less often. Many individuals with severe mental illnesses also have co-occurring substance abuse disorders (Sarteschi, 2009; Swartz & Lurigio, 2000). It was found that there was not enough descriptive information within this study regarding the participant's diagnosis and substance abuse history to examine the exact role substance abuse disorders may have had on noncompliance with mental health court participation. Several authors did include a discussion of the possible effect of drug and alcohol problems may have had on success in the mental health court program, but it was far from complete. Cosden and colleagues (2005) observed that the court was not effective for all participants but it was especially unhelpful for those with serious drug and alcohol problems. They found that individuals with serious drug and alcohol problems tended to go to prison at a higher rate than those who did not have serious drug and alcohol problems. This finding was consistent with their earlier 2003 study.

The services offered when participating in the mental health court, whether substance abuse counseling or medication management, are necessary for the recovery of the offender. The intervention and services are used as a tool for success to teach the participant how to manage their mental illness. These tools are then used once the participant reenters the community allowing them every opportunity for success. There is the necessity within the community to provide continuing care for offenders with SMI to manage their mental illness.

Reentering the Community and Continuing Care

Social workers in the jails or prisons have individualized contact with the inmates who are SMI, participate in group therapy sessions, assist the psychiatrists in encouraging inmates to take their medication and conduct follow-up to help ensure that they are doing so (Bender, 2003). In addition, they assist in conducting assessments and evaluations of the inmates as well as collaborate with the courts, the Department of Corrections and community agencies to find services for the inmates after their release. For a successful transition, a continuum of care needs to be provided. To remain stable, the individual will need to continue with the same type of treatment, counseling and medication they were receiving while in custody (Draine, Wolff, Jacoby, Hartwell, & Duclos, 2005). The problem here is there are far too few facilities available to provide such services. Without such services, it will only be a matter of time before the inmate is re-arrested, returned to the jail and recycled through the system. Community mental health centers (“CMHC’s”) are an ideal place for former inmates to receive such service (Draine et al., 2005). Such centers would also be the ideal location for providing services to others in our community who suffer from mental illness. CMHCs offer residential programs, day

treatment and some even provide assistance in finding employment for their clients. The recycling of mentally ill inmates through the jails is also fairly predictable due to the absence of case managers. Having case managers available would allow for follow-up care. Case managers could assist the mentally ill patient in keeping appointments, obtaining medication, benefits and services and ensuring that he is taking his medication. The failure to provide case managers guarantees that huge sums of money spent in the jail are effectively being wasted (Lamb, Weinberger, & Gross, 1999).

Persons with serious mental illness who are incarcerated are a particularly vulnerable population when they get released into the community. It is believed that nearly 100,000 inmates with a mental illness are reintegrating to communities annually (Draine, Wolff, Jacoby, Hartwell, & Duclos, 2005). When they return they usually have few resources and support. They are fraught with challenges, without friends or family, housing, sustainable employment or a reliable treatment plan (Lovell et al., 2002). Even if an offender with a mental illness participates in a mental health court program, he or she is not guaranteed access to treatment they were receiving during the program. Ridgley and colleagues (2007) found that the Allegheny County, Pittsburgh mental health court participants had to compete for services they once had, with all of the other individuals (previous inmates and non-inmates) needing access to those same services (Sarteschi, 2009). There is not much known on the assistance and resources by the mental health court after the participant completes the duration of the program. What is needed is research examining the long-term effect of mental health courts on reducing recidivism and improving clinical outcomes. One article, Steadman and colleagues (2010) examined recidivism, but research is lacking in this area. Access to medical

records is often difficult, even for those participating in the mental health court, in order to examine long-term effects the intervention has.

Implications for research

A number of research implications can be derived from the study. These findings suggest that mental health courts are somewhat of an effective program for reducing recidivism. Although studies of mental health courts have yielded some positive outcomes for participants, more research is necessary to determine what components of mental health courts work, for whom they work, and in which environments they work best. This is the second study to synthesize all of the available studies, which met specific criteria, to make an evidence-based statement on the status of mental health courts. From a research perspective, it is important to use interventions that are evidence-based. The implication of this is that mental health courts had been operating in absence of a unified body of research to justify their ongoing development. Earlier studies have indicated they are effective interventions and this study moderately supports those results as well as the results of the first meta-analytic study (Sarteschi, 2009).

It is also important to note that despite attempting to access as many mental health court evaluations as possible, searching the academic literature, including multiple databases, reference lists and Internet websites, only 45 studies were located on mental health courts. Seventeen of those studies could be found in peer-reviewed sources such as academic journals. Reasons for this could include lack of sufficient funding for existing courts or lack of interest by policy makers. With at least 250 mental health courts (Steadman et al., 2009) in existence and the hope of many more being built, there should be a more concerted effort to evaluate these existing courts. Proper evaluations could

pinpoint necessary revisions within the current model that newer courts could put into practice.

Finally, some individuals did not complete the mental health court program because they chose not to participate or were deemed noncompliant. The implication of this finding is that possibly a significant portion of individuals did not participate in the mental health court for reasons that have yet to be identified through research, whether it be the “stigma” attached to the mental health terminology or lack of motivation because other treatments have failed. Understanding “participant self-selection” is necessary to the mental health court process. This occurs when those offenders choose to participate in the intervention and seek treatments are going to have more successful outcomes because they are more motivated. This might make the program appear more successful than it actually is. The implication of this is an overestimation of program benefits.

There are certain aspects of mental health courts that could be improved upon. This list was compiled after examining participant feedback and researcher observations. (1) Increase activities for participants and make sure they are as active as possible, (2) Create a peer/mentor group of past participants to provide support and information about resources, (3) Either add more case coordinators or decrease their caseloads as it is difficult to contact them outside of assigned appointments, (4) Increase monitoring and consequences for participants not in adherence with the program, (5) Enforce random urinalyses for those with co-occurring disorders, and (6) Pay more attention to the underlying circumstances surrounding the offense and keep us more informed about what is going on legally.

Research findings, for the current study, show mental health courts have some

“success” in criminal justice outcomes and have the potential to guide their implementation and design. As previously mentioned, this study differed in methodology in various ways compared to the previous meta-analysis (Sarteschi, 2009). First, by omitting one-group research designs. Second, not including studies with the same sample for different years by the same author. Finally, only authors with known studies were emailed when access to those studies was not available through academic databases or Internet searches. The results for these two studies differed as well. The previous study found an effect size using the standardized mean difference for recidivism of -0.52 ($p < .05$). The results are reported as negative, but indicating a reduction in recidivism. Using Cohen’s d (1988) guidelines, this effect size can be interpreted as mental health courts have a medium effect for reducing recidivism for participants with SMI in the criminal justice system. Clinical outcomes were shown to have a nonsignificant effect for people with SMI in the criminal justice system, the same as the present work. The current study found a small to moderate effect (0.32 , $p < .05$) for reducing recidivism for individuals with SMI in the criminal justice system. The differences in methodology between the studies could account for the differences in effect sizes.

Limitations

These findings should be interpreted with the following limitations in mind. First, study quality was examined as moderator. There are some who contend that higher quality studies tend to have lower effect sizes when compared to lower quality studies. The premise is that higher quality studies are more rigorous and thus controls for more variability than do lower quality studies. It should also be noted that the omission of one-group research designs strengthens methodological quality. It was believed that studies

with stronger methodological quality would produce stronger results and support for mental health courts. The lack of one-group research designs could have an effect on these results. Methodological quality can also account for a substantial variation in effect sizes (Wilson & Lipsey, 2001).

A second limitation may be that not all available studies were included as part of this analysis. A thorough attempt was made to capture all the existing studies but it is plausible that some studies may have been missed. A third limitation is related to measurement and instrument scales. No study reported on the psychometric properties of measures for their specific evaluation. Therefore it was difficult to gauge the quality of these scales. Some research has shown that measures that are more reliable tend to produce larger effects than less well-developed measures (Smith, 2006).

Also, some studies used self-report measures. There is concern with the use of self-report measures. Individuals are not always truthful or they seek “social desirability” when using self-report measures (Colditz, Miller, & Mosteller, 1989). A sixth limitation is related to generalizability. Throughout the literature mental health courts vary considerably and the same was found in this analysis. Because there is no current standardized model of what a mental health court is it is difficult to generalize these findings to all courts across the United States. Despite these limitations, it is reasonable to assume that mental health courts have the potential to be effective in achieving their main goal of reducing recidivism for its participants.

Future Research

An overall assessment of the studies examined in this study is that future research needs to be stronger in methodological quality, describe what goes into a mental health

court intervention, have more detailed explanation of experimental and control groups, and look at long-term criminal justice and clinical effects for participant. Questions for future research include, (1) For whom do mental health courts work? (2) Are there certain participant characteristics associated with specific outcomes? (3) Are there differences between those offenders who chose to participant and those who do not? (4) Which of the key elements are most effective? (5) What specific types of treatment have the most positive outcome for participants? (6) What types of offenses have the most positive outcomes? (7) What happens when individuals are no longer under court supervision? More research is needed to determine whether some treatments are better than others. Current gaps in the literature include the lack of knowledge about the comparison groups within mental health court evaluations and about, what effect substance abuse diagnoses have on outcomes, as well as lack of detailed explanation of why certain individuals choose not to participate in a court, and of what exactly is meant by "noncompliance." The variations in this term could help answer why some offenders choose to participant and others decline.

Not enough is known about what types of treatments mental health courts are linking participants to. Depending on the location of the court, rural or urban area, the amount of funding they have in place to operate day-to-day, and other related factors, treatments are likely to vary from court to court. There should be an effort to examine what types of services mental health court participants are being referred to, who are the providers of these services, and how they are paid for. Mental health courts do not have control over the service providers and existing treatment options. Holding providers accountable for the services they provide is just on hurdle mental health courts cannot

jump. Communication between court staff and services providers is essential to provide the best possible outcomes for success of the participant.

Answering these questions will help strengthen the mental health court model and improve the outcomes for its participants. Identifying the target populations and under what circumstances these courts have the most positive outcomes is essential for future research. Designing courts in order to explain which components work, why they do, and what population they work for are the next steps in the development of these courts.

Conclusion

By and large, the impact of deinstitutionalization and the failure to simultaneously support mental health services in the community has led to a growing number of mentally ill persons housed in correctional facilities across the United States. As a result of this population growth, most jurisdictions have tried to adopt new strategies to divert appropriate populations of mentally ill people from incarceration into community-based services.

Mental health courts are one of a variety of initiatives to improve outcomes for people with mental illness. Research has just begun on their effectiveness, processes, and structure. Because no two mental health courts are alike, available treatment services, populations, and court jurisdictions vary by each individual court. Despite these variations, there are common essential elements that guide the development of the courts.

The studies included in this analysis add to the growing knowledge base of mental health courts. The results from this study indicate they are effective interventions for reducing criminal justice outcomes. In this analysis mental health courts were able to reduce recidivism by an effect size of 0.32 ($p < .05$). This effect size can be considered

mildly powerful with regard to recidivism outcomes. This finding suggests that individuals who participate in a mental health court program are statistically less likely to recidivate than are non-participants. The analysis also presented results for clinical outcomes for mental health courts. The effect size of -0.09 was not only not significant, but in the wrong direction. Thus, not supporting that mental health courts are effective in reducing negative clinical outcomes for participants. Finally, this study also showed that the majority of participants in mental health courts were white Caucasian males in their mid-30s, which was also supported in the first meta-analysis (Sarteschi, 2009).

As mentioned earlier, there are over 250 courts in existence but very few studies have been completed to demonstrate their effectiveness. A literature search through Google, academic databases, or the Bureau of Justice Assistance website shows that there has been continued development of mental health courts across the United States. These courts are currently being created (latest in Manhattan, NY, April 2011) without having strong empirical data and evaluations demonstrating their effectiveness in reducing recidivism. This research contributes to the previous meta-analysis with regards to recidivism outcomes. More empirically based evaluations are necessary for adequately assessing recidivism and clinical outcomes.

It is still unknown why some participants fare better than others in the same mental health court. Future studies should focus on for whom these courts have the best success for and what the best treatments and services are for participants. Finally, as these courts develop a framework through empirically- based studies, policy makers and practitioners can establish more specific elements to meet participant needs and produce more positive outcomes

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Appendices

Appendix A: Coding Form

Study Descriptors

[StudyID] Study identifier

[Date] Date coded

[Author] Author

[PubType] Publication type

1 Published peer reviewed journal article

2 Unpublished article

3 Thesis/ dissertation

[YrPub] Year of publication

Intervention Data

[ProgDes1] Treatment-Comparison Contrast Level

Program Description

[PrimTreat]Primary treatment type

1 Therapeutic Community (TC)

2 Multiple modes of treatment (depends on client characteristics)

3 Group counseling

Description of treatment:

[SpeTreat]Specific treatments delivered if given:

In what format or social setting is the treatment delivered [TxFormat]

- 1 One-on-one
- 2 Group setting
- 3 Family setting
- 4 Mixed (combination)
- 5 Cannot tell

Where does the treatment group reside [TXLocale]

- 1 Jail
- 2 Prison
- 3 Group home
- 4 Mixed

Who delivers or provides the treatment [TxStaff]

- 1 Mental health professionals
- 2 Criminal justice professionals
- 3 Nonprofessionals
- 4 Other
- 5 Cannot tell

Length of primary intervention [Lg_Int]

- 1 0-6 months
- 2 6-12 months
- 3 greater than 12 months
- 4 Cannot tell

Comparison group program description [ProgDes2]

What happens to the comparison group [CompGrp]

- 1 No treatment
- 2 Treatment as usual
- 3 Treatment drop-outs
- 4 Mix (combination)
- 5 Cannot tell

Where does the comparison group reside [CGLocale]

- 1 Jail
- 2 Prison
- 3 Other institution
- 4 Mixed
- 5 Cannot tell

Research Design and Methodological Rigor

[CntrlVar] Use of control variables in statistical analysis to account for initial group differences (1=Yes; 0=No)

[Random] Use of random assignment to conditions (1=Yes; 0=No)

[Matching] Use of subject level matching (1=Yes; 0=No)

[PriCrimInv] Measurement of prior criminal involvement (1=Yes;0=No)

[SimRate] Rating of initial group similarity (7=highly similar; 1= highly dissimilar)
Anchors

7= Randomized design large N or small N with matching

5= Nonrandomized design with strong evidence of initial equivalence

1= Nonrandomized design, comparison group highly likely to be different or known different that are related to future recidivism

[Attrit1] Was attrition discussed in the study reported? (1=Yes; 0=No)

[Attrit2] Is there potential generalizability threat from overall attrition?

0= No; 1=Yes; 8= N/A, no attrition problem; 9 cannot tell

[Attrit3] Is there potential threat from differential attrition? (1=Yes; 0=No)

[SigTest] Use of statistical significance testing (1=Yes; 0=No)

[MSSM] Maryland methodology rating

2 A comparison group is present but lacks comparability to the treatment group

3 A comparison group is present but differs slightly from the program group

4 A comparison group is present and it is very similar to the program groups, or a comparison group is present but it differs slightly from the program group, however, the data analysis controls for observed differences, or random assignment with large attrition

5 Random assignment and analysis of comparable program and comparison groups, including control or attrition

Characteristics of Subject and Setting

[TreatN] Treatment group N at beginning of study

[CntlGrpN] Control group N at beginning of study

[TMeanAge] Mean age of treatment group

[CGMeanAge] Mean age of control group

[TRace] Race of treatment group

0>50% white

1<50% white

[CGRace] Race of control group

0>50% white

1<50% white

[TGender] Gender of the treatment group

1 all males (>90%)

2 more males than female (60% to 90% males)

3 half and half

4 more females than males (60% to 90% females)

5 all females (>90%)

9 cannot tell

[CGGender] Gender of the control group

1 all males (>90%)

2 more males than female (60% to 90% males)

3 half and half

4 more females than males (60% to 90% females)

5 all females (>90%)

9 cannot tell

[CourtTyp] Type of court

1 misdemeanor

2 felony

3 mix
4 cannot tell

[ClinDiag] (text) Types of disorders of sample

Outcome (DV) data

[Recid] Recidivism

1 bookings

2 re-arrests

3 new convictions

4 jail days

[Scale] Type of measurement scale

1 dichotomous

2 continuous

[Source] Source of data

1 self-report

2 other report (teacher, parent)

3 Official record

4 Other

5 cannot tell

[Valid] Is this a valid measure of recidivism? (1= questionable; 2=acceptable)

[StudDes] Study Design

1 experimental

2 quasi-experimental

[ES_Type] Effect size type

1 baseline (pretest prior to start of intervention)

2 post-test (first measure point, post intervention)

3 follow-up (all subsequent measurement points, post intervention)

[ES_Direc] Which group does the raw difference favor (ignoring statistical significance)?

1 Treatment group

2 Control group

3 Neither

4 Cannot tell

[ES_sig] Is the difference reported as statistically significant?

0 no

1 yes

8 not tested

9 cannot tell

[TimeStudy] Timeframe of study

1 0-6 months

2 6-12 months

3 12-18 months

4 18 to 24 months

5 >24 months

Effect Size Data

[TreatGrpN] Treatment group sample size

[CompGrpN] Control group sample size

[TGMean] Treatment group mean

[CGMean] Control group mean

{MeanAdj} Are the means adjusted? (1=Yes; 0=No)

[TGSD] Treatment group standard deviation

[CGSD] Control group standard deviation

[ES_t] t-value from an independent sample t-test or square root of F-value from one-way ANOVA with one df in the numerator (two groups)

[ES_p] Exact probability of t-test or square root of F-value

[ES] Effect size computer calculation

d=

r=

Appendix B: Maryland Scale of Scientific Methods Guidelines

Level 1	Observed correlation between an intervention and outcomes at a single point in time. A study that only measured the impact of the service using a questionnaire at the end of the intervention would fall into this level.
Level 2	Temporal sequence between the intervention and the outcome clearly observed; or the presence of a comparison group that cannot be demonstrated to be comparable. A study that measured the outcomes of people who used a service before it was set up and after it finished would fit into this level.
Level 3	A comparison between two or more comparable units of analysis, one with and one without the intervention. A matched-area design using two locations in the UK would fit into this category if the individuals in the research and the areas themselves were comparable.
Level 4	Comparison between multiple units with and without the intervention, controlling for other factors or using comparison units that evidence only minor differences. A method such as propensity score matching, that used statistical techniques to ensure that the program and comparison groups were similar would fall into this category.
Level 5	Random assignment and analysis of comparable units to intervention and control groups. A well-conducted Randomized Controlled Trial fits into this category.