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Mental Distress Among Adults with Serious Mental Illness in a Criminal Legal Setting: A Secondary Data Analysis of the McArthur Mental Health Court Study Data

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MENTAL DISTRESS AMONG ADULTS WITH SERIOUS MENTAL ILLNESS IN A CRIMINAL LEGAL SETTING: A SECONDARY DATA ANALYSIS OF THE MCARTHUR MENTAL HEALTH COURT STUDY DATA

by

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ABSTRACT

Chronic criminal legal system (CLS) involvement among individuals with serious mental illness (SMI) is of growing concern. Mental health courts (MHCs) are a known diversion strategy currently used by the CLS to address this problem. MHCs are seen as an effective method for linking individuals with SMI to needed treatment, removing them from a detention setting, and subsequently reducing recidivism. However, less is known about the impact of MHC enrollment on mental health related outcomes (mental distress). Using the McArthur Mental Health Court Study data, this study aimed to inspect the impact of MHC participation, legal coercion, and treatment motivation on mental distress among adults with depression, schizophrenia, and bipolar disorder. Despite some data limitations, this study provides insight into the predictors of mental distress among MHC participants with SMI. Additionally, the findings encourage a review of the use of self-report measures of treatment motivation and legal coercion among adults with SMI that are CLS involved.

Keywords: mental health court, public safety outcomes, treatment access

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Chapter 1: Introduction

Despite substantial research and funding, state and federal governments and local communities struggle to fully meet the needs of citizens with serious mental illness (SMI). An SMI is a mental illness that "substantially interfere[s] with or limit[s] one or more major life activities" (Substance Abuse and Mental Health Services Administration [SAMHSA], 2021, p. 33). Common SMIs are Bipolar Disorder, Major Depressive Disorder, and Schizophrenia (SAMHSA, 2022). Approximately 5.6 percent of adults 18 and older have a serious mental illness. Of those adults, only 64.5 percent are estimated to have received any mental health services (SAMHSA, 2021). Based on these estimates, nearly 5.1 million adults with serious mental illness went without psychiatric treatment or mental health services.

According to SAMHSA (2022), individuals "with SMI can live productive and enjoyable lives" (para. 2) with treatment. However, unaddressed mental illness can have compound negative outcomes for the individual, their caregivers, and their communities (Sones et al., 2022). One of those outcomes is contact with law enforcement and involvement with the criminal legal system. In a systematic review of 85 studies on the prevalence rates of law enforcement contact with individuals that have a mental disorder, Livingston (2016) reported three prevalence estimates. First, having a history of police arrest occurs at a 1:4 rate among those with mental disorders. Second, among those receiving mental health care, 1 out of 10 had law enforcement contact before accessing treatment. Third, per 100 police dispatch events, one will involve a person with a mental disorder.

The Criminal Legal System Is the Largest Mental Health Provider

Individuals with documented mental health problems account for 45%, 56%, and 64% of the population in federal prisons, state prisons, and public jails, respectively (Fuller et al., 2015). Although the odds are higher for a person with an SMI to be incarcerated than hospitalized, these rates fluctuate state by state (Torrey et al., 2010). For example, in Nevada, those odds are 9.8 to 1, whereas, in North Dakota, it was a 1:1 ratio. The variance in these rates is likely affected by state population density, facility availability (hospital vs. detention), state resources, and state policies.

In addition to chronic criminal legal system involvement, individuals with SMI have an increased mortality risk during episodes of law enforcement contact. Encounters between individuals with untreated mental illness and law enforcement are 16 times more likely to be fatal, both for the individual and for law enforcement personnel (Fuller et al., 2015). Despite the 2013 passage of the Death in Custody Reporting Act, comprehensive or publicly accessible data on the prevalence of fatalities of individuals while incarcerated is scarce (Government Accountability office, 2022). Thus, as that data collection and reporting improves, the death rates among those with SMI at the time of police contact and when in custody should be examined and used to inform policy.

Court-Based Diversion

To address these issues of chronic legal system involvement and mortality of individuals with SMI, governing bodies (state and federal) and local communities have funded and implemented numerous prevention and intervention efforts at various stages

of an individual's involvement with the criminal legal system.[1] One such point of intercept is via the courts through judge-initiated referral to mental health treatment as an alternative to incarceration. Such programs have been coined problem-solving courts.

Therapeutic Jurisprudence

Problem-solving courts developed out of the perspective that legal procedure is a social context that can be wielded to change behavior (Wexler, 2000). This perspective originated from scholars of mental health law and became known as therapeutic jurisprudence. Therapeutic jurisprudence has been expanded to the criminal courts in an effort to address the root causes of "criminal behavior" and to prevent future law breaking (Brown, et al., 2009; Wexler, 2014). The first problem-solving court appeared in 1987 to alleviate the court docket and provide additional intervention for non-violent criminal offenders that have mental illness or an underlying substance use problem (Eckberg & Jones, 2015).

There are various problem-solving courts: Mental Health Courts, Drug Courts, Veteran's Courts, Juvenile Courts, Hybrid Courts, Opioid Courts, Domestic Violence Courts etc. Although each type of problem-solving court may have a component allowing the admission of individuals with SMI, the Mental Health Courts are the most well-known and researched when it comes to forensic populations with SMI. Today there are over 500 adult Mental Health Courts in the United States (SAMHSA, n.d.). Many of

[1] The Sequential Intercept Model (SIM; Munetz and Griffin, 2006) is a conceptual framework of those stages laid out in a linear pathway, though it is recognized that for many individuals with mental health and substance use disorders, their experience of the criminal legal system is not a linear process (Abreu et al., 2017). The SIM is organized by six intercepts or opportunities where individuals might be diverted to community treatment services and out of the criminal legal system.

which are federally funded through the Bureau of Justice Assistance (BJA; 2012), as authorized by Congress.

Mental Health Court.

Mental health courts (MHCs) are a formal diversion strategy for addressing the treatment needs of those individuals with SMI that become involved in the criminal legal system (BJA, 2012). Accordingly, MHCs offer an alternative to detention for individuals who meet court criteria. Rather than jail time, court participants agree to obtain mental health treatment while under court supervision. The benefit to the participant is that by meeting the program's conditions, the court will expunge the criminal charges against them and, in some jurisdictions, will also forgive any associated fees (Thompson et al., 2007).

Although MHCs are legislatively defined (see America's Law Enforcement and Mental Health Project, 2000; Mentally Ill Offender Treatment and Crime Reduction Act, 2004), MHCs vary in their procedures and participant criteria. This variation adds to the challenges associated with assessing their efficacy. In general, all MHCs limit participant eligibility by requiring participants to have a diagnosable mental health disorder that is not or is in addition to a substance use disorder. Additionally, MHCs are characterized by having an interdisciplinary team that collaborates to supervise the MHC participants' adherence to the conditions of MHC participation (Council of State Governments, 2005). Those conditions often include regular appointments with a mental health treatment provider and status hearings before the judge. Participants who fail to meet the court's conditions, such as missing treatment appointments, may be sanctioned by the court.

Researchers and other MHC stakeholders have been primarily occupied with two questions: (1) Whether MHCs reduce recidivism among their participants and (2) Whether MHCs reduce the costs associated with processing individuals with SMI through the criminal legal system. Significant challenges to answering these questions include a lack of standardization of procedures across mental health courts and inconsistent data collection. However, over the past two decades, researchers have produced numerous evaluations suggesting that MHCs effectively reduce the likelihood of future arrests and criminal legal system costs (BJA, 2012; Christy et al., 2005; Steadman, 2001). The MacArthur Mental Health Court Study is the most well-known and only multisite longitudinal study on MHCs to date.

The MacArthur Mental Health Court Study

The initial study was approved in 2007 by five institutional review boards,[2] several state and county departments,[3] as well as the Department of Health and Human Services-National Institutes of Health/National Institutes of Mental Health (HHS-NIH/NIMH). The MHC study researchers received data from MHCs and county jails from four jurisdictions.[4] Each jurisdiction provided MHC and jail interview data after obtaining informed consent and confirming participant eligibility. A baseline interview was conducted consisting of demographic, criminal, and mental health history questions, mental health symptomatology, as well as measures assessing coercion and motivation. Follow-up interviews were conducted at six months. The MacArthur Mental Health Court

[2] Santa Clara Valley Medical Center Research & Human Subjects Review Committee; University of California, San Francisco Committee on Human Research; Indiana University Bloomington Campus Committee for the Protection of Human Subjects; Minnesota Department of Corrections Human Subjects Board; Policy Research Associates Human Subjects Research Institutional Review Board.

[3] City and County of San Francisco Department of Public Health; Hennepin County Human Services and Public Health Department

[4] San Francisco County, CA; Santa Clara County, CA; Hennepin County, MN; and Marion County, IN

Study data are publicly available on ICPSR or upon request to Policy Research Associates, Inc.

Research Findings.

Several researchers have analyzed and published findings on the McArthur Study data, in addition to the original research team whose final report was submitted to the McArthur Foundation at the conclusion of the funding agreement. Each publication, and the final report, primarily focused on public safety outcomes such as appearance rates, general compliance, and difference in completion status by demographics and study site (see Redlich et al., 2010); arrests and jail days (see Keator et al., 2013; Steadman et al., 2011); costs (see Steadman et al., 2014); and community treatment utilization (see Redlich et al., 2016).

Redlich et al. (2010) examined MHC participants' appearances for court hearings, finding a difference in attendance rate depending on completion status and jurisdiction. Compliance with judicial orders, treatment attendance, and medication did not differ by demographic characteristics. However, there was a significant difference in general compliance between MHC sites, such that Marion, IN participants, demonstrated significantly higher compliance. Furthermore, the general compliance ratings for Hennepin, MN were significantly higher than those of Santa Clara, CA.

When examining prior arrests and number of jail days among MHC study participants, Steadman et al. (2011) concluded that MHC participants had a lower rate of arrests and jail days compared to Jail participants. Subsequently, Keator et al. (2013) found no difference among MHC participants on whether participants were arrested or in jail post-study enrollment when compared based on whether they received community-

based treatment. These findings suggest that while MHC participants reportedly have lower arrest rates and number of jail days than Jail participants before engaging in MHC, there are no differences in arrests or jail status after enrollment.

Keator et al. (2013) found that MHC participants engaged in community treatment services more quickly than Jail participants upon release from jail. Additionally, there was a significant difference in the number of crisis treatment episodes between groups, with the MHC group having more historical treatment episodes before study enrollment. In a related article, Han and Redlich (2016) examined the impact of community treatment utilization on recidivism rates, finding that for MHC participants, treatment utilization and medication compliance were significantly associated with a decrease in recidivism.

The original research team also examined the costs associated with MHC participants. These researchers used the MacArthur Study data and matched cost calculations using external data resources. Of concern, Steadman et al. (2014) found that MHC may not result in cost savings three years post-arrest compared to a matched jail group. The researchers concluded the cost to benefit ratio might be strengthened through more targeted enrollment criteria (i.e., limiting MHC enrollment to only the most severe cases).

More recently, one of the primary investigators published an article on community treatment usage differences by race. Han and Redlich (2018) compared the rates of treatment engagement upon release from jail of MHC participants and Jail participants. These authors found significant differences by race among the jail sample. Black participants were less likely to utilize mental or behavioral health services upon

release than White participants. This finding was not the same within the MHC sample, where race differences were non-significant regarding whether MHC participants engaged in treatment upon release, suggesting MHC positively impacted treatment seeking among Black participants.

A Clinical Psychology Perspective in MHC Research

Advocates of MHCs highlight the benefits of multidisciplinary collaboration. MHCs establish a path that links MHC participants to community treatment providers, while court personnel provide supervision and accountability (BJA, 2012). Ten essential elements of MHC implementation have been set forward (see Thompson et al., 2007). Each design element affects the efficacy and legitimacy of the specialty court (e.g., planning and administration, eligibility criteria, access to services etc.). However, one element ignites those core differences between criminal legal perspectives and behavioral and mental health professional ethics, and that is informed and voluntary choice.

Informed and Voluntary Choice

Informed consent and voluntary engagement in treatment are signature features of mental and behavioral health research and clinical practice.[5] The American Psychological Association (APA) is a science and professional organization responsible for funding and publishing psychological research as well as licensing and regulating psychologists in their clinical and research capacities. The APA Ethics Code sets the standards of professional conduct, and though it does not provide a basis for civil liability against psychologists, it can be enforced against their professional license by APA and other

[5] Human Samples Research Ethics: Nuremberg Code, 1947; Declaration of Helinsky, 1964; Belmont Report, 1978 and Clinical Practice Ethics: American Psychology Association (APA) Ethical Principles of Psychologists and Code of Conduct, 2017; American Counseling Association (ACA) Code of Ethics, 2014.

organizations that have adopted the Ethics Code (Fisher, 2023). Accordingly, beneficence and defense of individual autonomy are endorsed throughout the code (see Principle E: Respect for People's Rights and Dignity; Section 9.03: Informed Consent to Assessment; Section 10.01: Informed Consent to Therapy).

However, informed and voluntary choice principles have nuanced differences in their operational definitions in a criminal legal setting (Winick, 2002). In the legal setting, the MHC must uphold the civil liberties of individual defendants, including the right to a fair and speedy trial (U.S. Const. amend. VI) and due process under the law (U.S. Const. amends. V & XIV). Competency to stand trial, the requirement that the defendant understands the charges against them, is developed from the right of the individual to be protected from unlawful loss of life, liberty, and property (Due Process Clause). Any party, even the judge, can raise competency as an issue. Once raised, a separate legal process is initiated, in which the individual is evaluated and, if found not competent, is then referred to services intended to restore legal competence, at which time the legal proceedings resume (Determination of Mental Competency, 1948). Unless competency is raised, it is assumed, thus in the case of MHC enrollment, individuals' competency is generally not questioned, and their verbal agreement to the conditions of participating in the mental health court is sufficient evidence of the voluntariness of enrollment (Redlich & Summers, 2012).

Objective Coercion and Perceived Coercion

Separately, the right to a speedy trial creates several challenges for MHCs, most often resulting in MHC court being a post plea (i.e., the individual pleads guilty to the charges without a trial) and requiring the participant to waive their right to a speedy trial.

By waiving this right the case status can pend beyond the statutorily prescribed timeline, thus preserving the prosecutor's authority to charge and request sentencing if the individual fails to meet the requirements of MHC. Although individuals are expected to plead guilty in order to participate, their charges and conviction may be expunged upon the completion and successful graduation from MHC. Because of the legal context of MHCs, many researchers agree that MHC procedures are inherently coercive (Pratt et al., 2013; Ryan & Whelan, 2012; Winick, 2002). Nevertheless, other researchers have found that despite the objective coercion inherent in MHC enrollment, participant's perceived coercion to engage in MHC remained low (Poythress et al., 2002; Redlich & Summers 2012).

Redlich & Summers (2012) examined MHC participants perceived coercion to engage in mental health court against participants' understanding and knowledge of the MHC requirements. They found that individuals with low perceived coercion also reported a lack of knowledge of the expectations of MHC participation or knowing that participation was voluntary. Thus, inaccurate knowledge of participant responsibilities, along with a lack of awareness of the voluntary nature of MHC, may influence an individual's perception of coercion (Redlich & Summers, 2012). Based on these findings objective coercion and perceived coercion are clearly not synonymous, and their impact on outcomes among MHC participants likely varies.

Rather than examining the effect of legal forces (e.g., threat of incarceration) to enroll in MHC, which, as stated above, generally requires waiving legal rights and admitting guilt, perceived coercion to engage in treatment signals different pressures and incentives. Perceived coercion to engage in MHC intertwines elements of motivation and

agency, such as feeling as if they had a voice in whether to go to treatment or if going to treatment was their choice (Cusack et al., 2010). Interest in treatment efficacy is stirred when considering the impact of perceived coercion. However, ethical considerations for mental health professionals are clearly invoked when considering objective legal coercion; where a participant in MHC is court mandated to receive treatment. In a study on the effect of coercion on treatment outcomes among an adult forensic population, Wolfe et al. (2013) found that coercion, regardless of the type (legal or perceived) was not associated with the change in substance use behavior, post treatment. However, the Wolfe et al. (2013) study may not generalize to MHCs because enrollment in adult outpatient substance use treatment is procedurally and substantively different than enrollment in a judicially supervised MHC. In MHC, treatment attendance is a requirement of participation and the treatment provider directly collaborates with the judge, case managers, probation officers, and attorneys. Thus, under these circumstances objective legal coercion to engage in court supervised mental health treatment may affect the efficacy of treatment and should be contemplated in relation to the ethical practice of providing mental health treatment services in this context.

The Efficacy of Treatment Motivation in Psychotherapy

As mentioned above, to the clinical practitioner, an individual's voluntary engagement is considered a core ethical principle. However, in addition to the ethical reasons for prioritizing voluntary engagement, many empirically supported treatment (EST) modalities reference an individual's autonomy and sense of self-determinism as being the main drivers of treatment success. For example, Holzhauer et al. (2020) found that personal autonomy was influential in individual outcomes among a population of

women receiving Cognitive Behavior Therapy for alcohol use disorder (AUD). Similarly, several qualitative studies have examined the reflective narrative of individuals who received psychotherapy and found a common thread of client-agency as a critical factor in obtaining positive outcomes (Acke et al., 2022), as well as individual factors such as low agency moderating the efficacy of psychotherapy regardless of the modality (Bohart, 2000). In other words, motivation for treatment of any kind may be a stronger predictor of improved mental health than the type of treatment applied.

In alignment with these findings, a whole branch of treatment research has developed around therapeutic methods for increasing and cultivating individual motivation (Holtforth & Michalak, 2012). A plethora of motivation-based treatments exist for treating a range of mental illness diagnoses, including Motivational Interviewing (MI; Miller & Rollnick, 2012), and Motivation Enhancement Therapy (MET; Miller, 1995). At the same time, other motivation-based modalities address issues of agency and personal autonomy, such as acceptance and mindfulness-based treatments (e.g., Acceptance and Commitment Therapy [ACT]; Hayes, et al. ,1999). Accordingly, where the internal motivation to engage in treatment promotes positive mental health outcomes, the opposite effect would be expected from external pressure to engage in treatment due to legal coercion. However, there may be greater nuance to this relationship when considering those findings showing minimal to no effect of coercion on other outcomes such as substance use behavior among a sample of non-violent offenders legally coerced to community-based drug and alcohol treatment (Wolfe, 2012) or treatment utilization among a sample of jail diversion participants (Cusack, et al., 2010).

The Protective Effects of Social Connection

Individual characteristics are often asserted to be strong predictors of involvement with the criminal legal system and post involvement outcomes. Race, housing stability, and socioeconomic status are such correlates and many researchers and criminology experts have asserted theories for why these relationships exist. Causal theories range from systemic and institutional bias to individual criminogenic tendencies (Alexander, 2011; Bonta & Andrews, 2015; Weatherburn, 2001). Furthermore, it should be noted that an action in itself is not a crime unless it has been encoded as such and a person is not counted as a "criminal" until they've been apprehended and convicted. Thus, research conclusions on what causes a person to become involved in the criminal legal system are confounded by the risks of statistical error (e.g., Sampling Error: drawing conclusions about criminality when there are uncounted criminal actors whose individual characteristics may have protected them from arrest or conviction).

Nevertheless, while the question about whether individual characteristics may protect an individual from involvement with the criminal legal system remains outstanding, there are others who have found that individual characteristics can be used to predict future recidivism among those that become involved with the criminal legal system (see the First Step Act Risk Assessment Tool: PATTERN). Additionally, economic status indicators (e.g., employment, housing, and education attainment), as well as social connection (e.g., relationship status and interpersonal contact) are confirmed predictors for mental health outcomes (Chronister et al., 2022; SAMHSA, 2022). Additional research is needed to assess the role these characteristics have in mental health outcomes among those with SMI who are involved in the criminal legal system.

Current Study Using the MacArthur Study Data

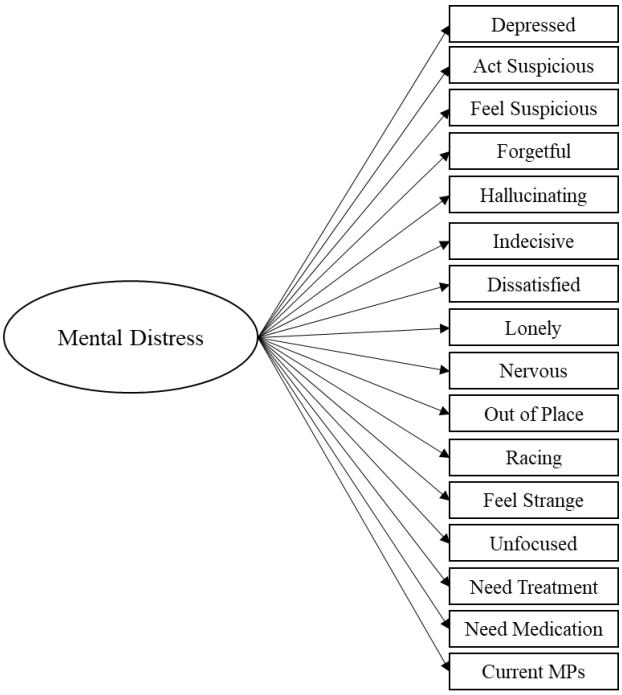
The prior analyses of the MacArthur Study data have primarily focused on public safety outcomes among MHC and Jail participants. However, a few more recent publications have looked at mental health related outcomes such as treatment utilization and quality of life. In the MacArthur Study dataset, treatment motivation was found to predict higher treatment utilization rates among MHC participants than Jail participants (Han & Redlich, 2016). Subsequently, Matejkowski et al. (2020) found an association between quality of life and "perceived voluntariness" of treatment and a finding that perceived voluntariness is significantly different among MHC participants compared to traditional court participants. Similarly, a different study (not MacArthur Study data), Pratt et al. (2013) found that the experience of "negative pressures" such as perceived coercion, was associated with poorer perceptions of recovery and predicted higher risk of future criminal legal system involvement at 12-months. Based on these findings it is reasonable to infer that coercion and motivation would have an impact on mental health over time. Although researchers have begun expanding their inquiries of MHC effects from public safety outcomes to include mental health and individual wellbeing outcomes there is room for further examination. Specifically, examination of the interaction between coercion and motivation on mental health outcomes among adults with mental illness in a criminal legal setting. Expanding research in this way will allow us to answer additional questions such as: what is the effect of MHC participation on the mental wellness of individuals with serious mental illness?—are there ways to improve that effect by reducing the coercive practices of the legal system?—or by increasing personal motivation to engage in treatment?

Objectives

The first objective of this study was to conduct a confirmatory factor analysis (CFA) to test the fit of a model identifying the latent construct "Mental Distress" using 16 mental health-related indicators (Figure 1). This author hypothesized that the latent construct "Mental Distress" (MD) could be identified within a population of adults involved in the criminal legal system with a diagnosed mental health disorder.

Figure 1

Proposed Measurement Model of Mental Distress



The second objective was to account for covariates—individual characteristics that were not controlled for during the data collection. Adding covariates reduces error by accounting for their effect on mental distress outcomes and their relationship with other control variables. The associations of relevant social stability (employment status and educational attainment) and social connection (relationship status and family contact)

were examined. It was hypothesized that by controlling for individual characteristics, the differences in social variables would be negatively associated with mental distress outcomes.

The third objective was to examine the effect of motivation and coercion on mental distress outcomes over time, where motivation was anticipated to be inversely associated with mental distress and coercion would be positively associated. Furthermore, the associated hypothesis the interaction between motivation for treatment and coercion would moderate mental distress outcomes. Should a significant interaction occur, the fourth objective was to examine the interaction effects of coercion and motivation on mental distress outcomes among MHC and Jail participants.

Chapter 2: Method

MacArthur Mental Health Court Study data were requested and received in SPSS format; an initial review of the data quality and a general assessment of the data was conducted through SPSS Version 29 analysis software. After obtaining the baseline (Time 1) and 6-month (Time 2) interview guide and the data codebook, this investigator identified the variables of interest to the current study. Descriptive statistics and zero-order correlations have been examined for all variables of interest.

Study Design

The original study design was a repeated measures, matched Jail to MHC sample, with multi-site data collection. The study enrollment process for MHC participants is described in detail by Redlich, et al., (2010). The individuals in the MHC sample were identified by the site after MHC enrollment and referred for study enrollment. Subsequently, the individuals in the jail sample were identified by jail staff. Eligibility for the study required that Jail participants were also eligible for MHC, but not referred or not enrolled. The potential participants for the jail sample were then selected for study enrollment based on arrest charge and rates of mental illness matched to the mental health court sample. Additional information on the identification and selection of Jail participants is described in more detail by Steadman et al., (2011).

Participants

Study eligibility criteria called for participants to have a diagnosed mental illness and be 18 or older. Participants gave informed consent prior to being interviewed. Each jurisdiction provided data on a MHC and jail sample. In-person interviews were conducted in each jurisdiction. MHC participants were interviewed at the courthouse,

while Jail participants were interviewed at the jail. Each jurisdiction removed all identifiable participant information and assigned each case a unique identifier before submitting data.

Jurisdiction, Criminal Legal Setting, and Attrition

The participant data were collected from one of four jurisdictions (San Francisco, n=254, 24.3%; Santa Clara, n=334, 31.9%; Hennepin, n=248, 23.7%; Marion, n=211, 20.2%). The participants were N=1047 (Jail, n=600, 57.3%; MHC, n=447, 42.7%) with a mental health diagnosis.[6] Additional descriptive statistics for criminal legal setting and presented in Table 1.

Table 1

Participant Characteristics and Social Variables by Legal Setting

	MHC		Jail		Total	
	n	%	n	%	n	%
Jurisdiction						
n	447		600		1047	
% San Francisco		24.2		24.3		24.3
% Santa Clara		30.4		33.0		31.9
% Hennepin		23.3		24.0		23.7
% Marion		22.1		18.7		20.2
Gender						
n	447		600		1047	
% Men		57.9		63.2		60.9
% Women		42.1		36.8		39.1
Age						
n	447		600		1047	
% 29 and under		27.3		26.2		26.6
% 30 to 37		20.1		27.7		24.5
% 38 to 44		23.0		24.8		24.1
% 45 and over		29.5		21.3		24.8

[6] The study eligibility criteria included: (1) mental health diagnosis (other than SUD); (2) primary diagnosis is not developmental disability; (3) speak and understand English; and (4) stable/competent (See Redlich et al., 2010, for more detailed eligibility explanation).

Table 1 (Continued)

Education						
n	446		600		1046	
% No HS Diploma		39.5		42		40.9
% HS Diploma		60.5		58		59.1
Employment						
n	446		600		1046	
% Unemployed		74.7		61.7		67.2
% Employed		25.3		38.3		32.8
Relationship Status						
n	445		598		1043	
% Single		73.9		63.7		68.1
% In a relationship		26.1		36.3		31.9
Family Contact						
n	351		375		726	
% Low Contact		22.5		29.3		26
% Medium Contact		54.4		53.9		54.1
% High Contact		23.1		16.8		19.8

Note. HS=High School, MHC=Mental Health Court.

Participant Characteristics and Social Context Variables

These data report gender on a binary (woman or man), and interviewers were instructed to mark the gender of the individual as perceived by the interviewer. Accordingly, there are 409 women (39.1%) and 638 men (60.9%) recorded in this dataset. Participants ages ranged from 18 to 75, with a median age of 36. Participants were asked to report their highest level of education attained (Some High School, n=428, 41%; High School Degree, n=371, 35%; Some College or More, n=247, 24%). For ease of analysis, education was collapsed based on high school degree status (Table 1). Employment status was asked at baseline. 333 (74.7%) of MHC participants reported having neither part time nor fulltime employment during the 2 months prior to the time of the interview. Whereas 370 (61.7%) of Jail participants reported unemployment in the 2 months prior.

Participants were asked about their current relationship status at Time 1 and at Time 2; however, there was no significant difference in relationship status at Time 2 compared to Time 1. A paired samples t-test was conducted comparing relationship status over time among participants. There was not a significant difference in relationship status between Time 1 (M= 4.22, SD=1.863), and Time 2 (M=4.30, SD=1.850); t (722) =-1.258, p=.209. Relationship status at Time 1 was used in the remainder of the analysis. Furthermore, relationship status was dummy coded; In a Relationship, 1=Yes, n=333. The response rate for family contact was substantially reduced compared to all other variables (N=726; MHC: n=351; Jail: n=375). The reason for this missingness is due to the family contact item not being included in the Time 1 Interview. A chi-square test of independence was tested to examine family contact by legal setting. The relationship was significant χ^2 (2, N=726) =6.857, p<.05. Table 1 shows that 23% of the MHC sample (n=351) reported high levels of contact with family, whereas only 16.8% of the jail sample (n=375) reported high levels of contact with family.

Diagnosis

Diagnosis data were collected during the initial interview and individuals were permitted to designate multiple diagnoses. Diagnosis endorsements are presented in Table 2 showing breakdown by legal setting. Several chi-square tests of independence were performed to examine the participant diagnoses by legal setting. The relation between bipolar diagnosis and legal setting was not significant, χ^2 (1, N=1047) =.002, p=.967. However, a depression diagnosis was significantly less prevalent among those in mental health court, χ^2 (1, N=1047) =85.534, p<.001, out of 385 participants reporting a depression diagnosis only 24.2% (n=93) were in the MHC setting compared to 75.8%

(n=292) in the Jail setting. In contrast, 63.9% (n=159) of the 249 participants with schizophrenia were in the MHC setting and 36.1% (n=90) in the Jail setting, which also resulted in a significant association χ^2 (1, N=1047) =59.799, p<.001. Similarly, substance use diagnosis was significantly associated with legal setting χ^2 (1, N=1047) =26.232, p<.001. Inspection of the sample crosstabs shows that a greater proportion of individuals not reporting substance use disorder are in the jail sample (n=488, 61.8%) compared to those in the MHC sample that did not report having substance use (n=302, 38.2%). Furthermore, there is a discrepancy in the reporting of diagnoses as individuals in the jail setting were identified for eligibility in the study via jail records of diagnoses whereas individuals in the mental health court study would have a more recent mental health assessment stemming from self-reported or court identified mental health problems.

Table 2

Diagnosis by Legal Setting

	MHC	Jail	Total
	n (%)	n (%)	n (%)
Bipolar	113 (42.8)	151 (57.2)	264 (25.2)
Depression	93 (24.2)	292 (75.8)	385 (34.2)
Schizophrenia	159 (63.9)	90 (36.1)	249 (23.8)
Substance Use	145 (56.4)	112 (43.6)	257 (24.5)
Other[a]	150 (43.5)	195 (56.5)	345 (33)
Single Diagnosis[b]	262 (40.7)	381 (59.3)	643 (61.4)

Note. N=1047. Column percentages may exceed 100 because individuals were permitted to choose all that apply.

[a]Other includes anxiety, personality, post-traumatic stress, and other; [b]Calculated variable to identify individuals reporting only 1 diagnosis.

Race and Ethnicity

Participants were asked to identify their race(s) in a check all that apply item for White, Black, Native American, Asian, Pacific Islander, Alaskan Native, and Other.

Participants reported the following races: White, n=511, 53%; Black, n=370, 38%; Native American,[7] n=130, 13.5%; Asian, n=47, 4.5%; Pacific Islander, n=20, 2%. No participants endorsed Other. (See Table 3 for Race and Ethnicity descriptive statistics). Participants were asked to designate their ethnic origin (Hispanic, n=183). These race and ethnicity variables were treated in two ways. First, each race/ethnicity category was dummy coded (0, 1) and included in analyses. Second, to capture those that endorsed more than one race or a race and ethnicity, a new variable was created using both the original race variable and the Hispanic item to identify those endorsing a single race or ethnicity and those endorsing multiple races or a race and ethnicity (Multiracial; 1=Yes, n=195).

Table 3

Race and Ethnicity by Legal Setting

	MHC[a]	Jail[a]	Total[a]
	n (%)	n (%)	n (%)
Hispanic	67 (36.6)	116 (63.4)	130 (12.4)
Black	162 (43.8)	208 (56.2)	370 (35.3)
White	221 (43.2)	290 (56.7)	511(48.8)
Asian and Pacific Islander	26 (40)	39 (60)	65 (6.2)
Native American	43 (33.1)	87 (66.9)	130 (12.41)
Multiracial[b]	71 (36.4)	124 (63.6)	195 (18.6)

Note. Valid N=957, listwise missing n=90.

[a]Column percentages exceed 100 percent because individuals were permitted to choose all that apply. [b]A computed variable identifying participants who endorsed two or more races or ethnicity.

Two characteristics of these data drove the decision to approach the ethnicity and race data this way. First, there was high missingness of the race item for those that endorsed Hispanic on the ethnicity item. This missingness is a known issue, often seen in

[7] Alaska Native was merged into Native American, 1 participant endorsed Alaska Native however, they also endorsed Native American.

census data and other studies reporting race and ethnicity (Ennis et al., 2015; Ríos et al., 2014). Individuals identifying as Hispanic are more likely to decline to answer or respond "Don't know" when asked about their race. Thus, to get a full sense of the race and ethnicity of the sample, the ethnicity item was treated the same as the race items. This approach to the race and ethnicity data allowed for simplified data analysis and more meaningful interpretation of the results.

Several chi-squared tests of independence were conducted to test whether enrollment in mental health court was associated with racial identity. Enrollment in mental health court was not significantly associated with most of the racial and ethnic identities (i.e., Black, Asian, Hispanic, and White). However, Native American and Multiracial identities were significantly associated with legal setting. Native American participants were less likely to be enrolled in mental health court χ^2 (1, N=963) =5.905, p<.005 where 33% (n=43) of the Native American participants were in MHC, while 67% (n=87) were in the Jail setting. The Multiracial population were also less likely to be enrolled in MHC χ^2 (1, N=957) =4.007, p<.05. This result is likely driven by the fact that 80% (n=104) of individuals endorsing Native American identity also endorsed at least one other race.

Assessments and Measures

Objective Legal Coercion

The MacArthur Perceived Coercion Scale (MPCS; Gardner et al., 1993) consists of nine items. The nine perceived coercion to engage in treatment items are from the Modified Admission Experience Survey (MAES). The MAES was developed by the MacArthur Research Network on Mental Health and tested in a population involved with

the criminal legal system. The MAES was found to have high construct validity (Gardner et al., 1993). However, the validity of the 9-item MPCS is less supported in the literature, additionally the scoring and interpretation of the MPCS has varied across studies (compare Gowda et al., 2016; Matejkowski et al., 2020; and Redlich & Summers, 2017). The first eight questions use a 5-point Likert-type scale with answers ranging from "strongly disagree" to "strongly agree." The questions focus on domains associated with perceived coercion to engage in treatment (i.e., freedom, choice, initiative, control, and influence). Additionally, these items ask about prior experiences going to mental health, alcohol or drug treatment. In contrast, the ninth question is a yes or no question that asks for existing legal system requirements to attend treatment or take medication. For the purposes of this project only the ninth item was used to identify a participant's endorsement of current Legal Coercion to engage in treatment. In this sample, 501 participants endorsed the Legal Coercion item, 182 (36.32%) of those were the jail sample. Subsequently, a chi-square test of independence was conducted to test whether endorsement of objective legal coercion is associated with legal setting. The test was significant, χ^2 (1, N=1023) =177.948, p<.001. An examination of the cross tabs shows individuals that endorse coercion (n=501) are more likely to be in the mental health court setting (n=319, 63.67%), whereas those that fail to endorse legal coercion (n=522) are more likely to be in the Jail setting (n=405, 77.59%).

Motivation to Engage in Treatment

Motivation to engage in treatment was examined using a single item from the short version of the Treatment Motivation Questionnaire (TMQ; Ryan et al., 1995). The TMQ has been used in several settings. Ryan et al. (1995) first used the measure among a

sample of adults entering alcohol treatment, and Zeldman et al. (2004) subsequently used the measure among a population of people receiving treatment at a methadone clinic. The developers of the measure identified two motivation factors within the TQM: internal and external. (See Appendix for the short TMQ).

For this study, only one item from the internal factor was used. This is for two reasons. First, the study design of the original MHC study only included 9 of the 26 items of the TMQ, meaning that prior scoring recommendations and validation studies are inapplicable. Second, the face validity of the internal items is mixed. Two items appear to have negative external drivers (guilt and shame). The single item, "I decided to come to treatment because I was interested in getting help," is the only item that asks for the individual's personal motivation to engage in treatment. Descriptive statistics for Motivation are M=4.80 and SD=1.76. Missingness on this item is 15%. Motivation was examined as a moderator with four levels: No Motivation (n=52), Low Motivation (n=150), Mid-level Motivation (n=181), High Motivation (n=506). An independent samples t-test was conducted to test whether individuals differed in motivation by legal setting. The test was non-significant, suggesting no differences in motivation for treatment by legal setting. Among the MHC population (n=392) the average level of motivation was 2.28 (SD=.96) and the jail sample (n=498) had an average motivation of 2.29 (SD=.93).

Mental Distress Latent Factor

Mental Distress was measured using 12 items from the Colorado Symptom Index, a Life Satisfaction question, and 3 items from the Insight and Treatment Attitudes Questionnaire; each are described in more detail below. The 13 items of Mental Distress

demonstrate good reliability at Time 1 (alpha=.88, M=32.4659, SD=12.6726) and at Time 2 (alpha=.90, M=27.2376, SD=13.1373). Item-level descriptive statistics for the Mental Distress indicators are presented in Table 4.

Table 4

Item-Level Descriptive Statistics for Latent Factor Mental Distress

	Time 1					Time 2				
	n	M	SD	Sk	K	n	M	SD	Sk	K
Act Suspicious	1045	0.98	1.36	1.09	-0.23	724	0.68	1.14	1.55	1.27
Depressed	1046	2.69	1.28	-0.71	-0.51	724	2.25	1.36	-0.24	-1.10
Feel Suspicious	1046	1.54	1.50	0.40	-1.29	723	1.23	1.41	0.69	-0.94
Forgetful	1044	1.70	1.40	0.22	-1.23	724	1.46	1.32	0.46	-0.98
Hallucinate	1046	1.07	1.45	0.97	-0.59	724	0.81	1.30	1.40	0.56
Indecisive	1045	2.22	1.38	-0.26	-1.12	724	1.88	1.39	0.05	-1.18
Dissatisfied	1044	3.37	1.63	-0.18	-0.60	724	2.75	1.59	0.23	-0.46
Lonely	1046	2.65	1.43	-0.69	-0.86	724	2.27	1.48	-0.28	-1.30
Nervous	1046	2.91	1.21	-0.92	-0.09	725	2.46	1.29	-0.38	-0.92
Need Rx	1044	1.55	0.80	-1.33	-0.10	726	1.55	0.81	-1.31	-0.19
Have MPs	1041	1.57	0.75	-1.36	0.15	724	1.48	0.80	-1.09	-0.56
Need Tx	1046	1.43	0.84	-0.94	-0.93	724	1.35	0.90	-0.74	-1.35
Out of place	1039	2.08	1.50	-0.12	-1.38	717	1.67	1.49	0.30	-1.30
Fast Thoughts	1046	2.30	1.48	-0.33	-1.25	724	1.92	1.47	0.01	-1.37
Feel Strange	1045	1.85	1.49	0.09	-1.38	722	1.41	1.45	0.53	-1.13
Unfocused	1047	2.45	1.34	-0.46	-0.94	725	2.08	1.38	-0.11	-1.16
Valid n (listwise)	1013					703				

Note. n=sample, M= mean, SD= standard deviation, Sk= skewness, K= kurtosis, MP= mental problems, Rx=medication, Tx=treatment

Modified Colorado Symptom Index.

The psychometric properties of the Colorado Symptom Index (CSI; Shern et al., 1994) have been examined in multiple populations (Mental health sample: Shern et al., 1994; Medicaid Recipients: Boothroyd & Chen, 2008). The original version of the CSI consists of 19 items; 14 questions inquire about the frequency of different mental health problems, four questions follow-up on items that may be due to substance intoxication,

and 1 question is a follow-up regarding the impact on the individual's life given the presence of a mental health problem. Respondents use a 5-point Likert-type scale: 0 = Not at all, 1 = Once during the month, 2= Several times during the month, 3= Several times a week, 4= At least every day. Based on the original findings of Shern et al. (1994), the five follow-up items have been dropped, resulting in the Modified Colorado Symptom Index (MCSI). The MCSI has been validated in a national sample of adults experiencing homelessness (Conrad et al., 2001). Conrad et al. (2001) found that the modified CSI (MCSI) has "excellent test-retest reliability" and construct validity based on significant correlations with other standardized measures (Brief Symptom Inventory; Life Satisfaction Index; Treatment Services Needed and Received Scale). In the MHC study data, the scale demonstrated good reliability at Time 1 (alpha=.884, M=25.59, SD=12.007) and at Time 2 (alpha=.896, M=20.75. SD=11.972). See the Appendix for a list of the items.

Insight and Treatment Attitudes Questionnaire.

The Insight and Treatment Attitudes Questionnaire (ITAQ; McEvoy et al., 1989) is an 11-item questionnaire with a 3-point Likert type response pattern: 0=No, 1= Possibly Yes, 2=Yes. Questions ask about past, present, and future mental health problems, medication, treatment use and need. The ITAQ has been used predominantly among samples with schizophrenia diagnoses (Mohamed et al., 2014; Siu et al., 2015; Weiler et al., 2000). Only the items regarding present mental health problems, medication use, and treatment need were used for this study.

The rational for limiting to current insight was based on the intention that the mental distress latent factor be a measure of present mental health status that could be

examined overtime. This researcher believed the past and future oriented items of the ITAQ would conflict with this goal. Accordingly, in the MHC study data, the three Current ITAQ items' scale reliability was sufficient at Time 1(alpha .743, M=4.55, SD=1.936) Time 2 (alpha=.779, M=4.38, SD=2.092).

Life Satisfaction.

Life satisfaction is assessed via a single-item question: "How do you feel about your life as a whole?" Participants respond on a 7-point Likert-type satisfaction scale, from Terrible to Delighted. Single-item life satisfaction questions have been used by others and validated in mental health treatment populations (Andrews & Withey, 1976; Bech, 2012). For the purposes of analyses the Life Satisfaction item was reverse coded and renamed Dissatisfied. Accordingly, after reverse coding the mean dissatisfaction, for the MHC study dataset, the participants reported a mean dissatisfaction of 3.37 at Time 1 (SD=1.635) and a mean dissatisfaction of 2.74 (SD1.587) at Time 2.

Data Screening and Data Management

The McArthur MHC data were evaluated for missingness due to attrition. At Time 2; there was considerable attrition with only n=725 completing the surveys at Time 2 (Jail, n=375, 51.7%; MHC, n=350, 48.3%). Participant attrition was considered during the initial assessment of the data. Three hundred twenty-two participants (31 percent) were not interviewed at Time 2. Missingness at Time 2 was explored via crosstabs with study site, interviewer code, and criminal legal setting with no pattern of missingness identified. Rather, the majority of missingness can be attributed to the inability of interviewers to locate individuals to schedule the Time 2 interview. Table 2 shows the Time 2 missingness by Jurisdiction and Legal Setting.

Table 5

Attrition by Legal Setting and Jurisdiction

	Missing at Time 2					
	Yes		No		Total	
	n	%	n	%	n	%
Legal Setting						
n	321		726		1047	
% Jail		70.1		51.7		57.3
% MHC		29.9		48.3		42.7
Jurisdiction						
n	321		726		1047	
% San Francisco		35.5		19.3		24.3
% Santa Clara		31.8		32		31.9
% Hennepin		19.9		25.3		23.7
% Marion		12.8		23.4		20.1

In addition to examining the missingness at Time 2 by Legal Setting and Jurisdiction, the missingness in relation to the observed dependent variables was assessed. The missingness of the 16 mental health related variables at Time 1 did not exceed 1%. However, the missingness in the 16 indicator variables at Time 2 ranged from 30.7% to 31.5%. Associations between the missing at Time 2 and Time 1 responses on the mental health related indicators were examined. Missingness at Time 2 was not significantly associated with Time 1 responses. As a result of not identifying a pattern of missingness variables with missing items will not be dropped and where necessary pairwise deletion was specified for analysis.

Chapter 3: Results

Using Mplus (Version 8.7) statistical analysis software (Muthén & Muthén, 1998-2021), a confirmatory factor analysis (CFA) was conducted to test the hypothesized model with the McArthur MHC Study dataset. All indicators were identified as categorical (ordinal) thus factor analysis was conducted using Weighted Least Squares Mean and Variance-Adjusted (WLSMV) estimation was used in all factor analyses. WLSMV estimation is supported for categorical data over maximum likelihood, due to it providing less biased results, particularly for non-small (N>200) samples (Li, 2016; Nussbeck et al., 2006).

Model fit was based on several fit indices using recommended cutoffs from multiple sources (Hu & Bentler, 1999; Kline, 2011). However, the use of blanket cutoff values for fit has been cautioned against (Xia & Yang, 2019). Furthermore, the most common cut off values used, have been developed from the use of maximum likelihood estimation and with continuous outcome measures, thus appropriate and informative cut off values for fit indices when using WLSMV for categorical data is lacking. Xia & Yang (2019) found that the use of common cutoff values in these instances resulted in the failure to identify misfit and recommended caution when promoting such models in research literature. Nevertheless, the use of set cutoff values remains standard practice. Thus, to reduce the risk of failing to identify misfit in these models the most conservative recommended cutoff value was used for root mean squared error of approximation (RMSEA) of <.05 with a 90% confidence interval (CI).[8] Additionally, assessment of fit

[8] Although, commonly considered the "Gold Standard" the <.05 cutoff value for RMSEA has been shown to be sensitive to sample size, such that the large the sample the less likely a misfitting model will be rejected. See Chen et. al., 2008.

may be sensitive to reductions based on the comparative fit index (CFI) and Tucker-Lewis index (TLI) which both have a recommended cut off value of (>.90) and standardized root mean square residual (SRMR) which has a recommended cut off value of (<.05). It is standard practice to report the χ^2 test result (an absolute fit index), the χ^2 test has been found to be sensitive in identifying misfit with large sample sizes (Babyak & Green, 2010). Therefore, the χ^2 test of model fit with degrees of freedom (df) and p-value were reported for every model. A significant (p>.05) χ^2 test denotes a poor fitting model.

Analysis of the Proposed Model

The results of the CFA show the proposed model does not fit the data well: N=1047, RMSEA=.140, 90% CI [0.135-0.145], CFI=.834, TLI= .808, SRMR=.088. The χ^2 test of model fit was significant at (104) = 2244.108, p<.001. Given poor fit of the proposed confirmatory factor model, an exploratory factor analysis (EFA) was conducted to identify an alternative factor structure for the 16 observed variables.

Exploratory Factor Analysis

EFA is driven by data rather than theory; thus, any fitting solution should be retested in data with a similar sample before being generalized. Preliminary tests were conducted prior to the EFA. A Kaiser-Meyer-Olkin (KMO) test was conducted using SPSS Version 29 data analysis software. KMO values nearer to 1 indicate the sample is adequate for factor analysis using the observed variables (Watkins, 2018; Field, 2005). Bartlett's Test of Sphericity tests the common variance among variables. Here KMO= .90. Bartlett's test of sphericity χ^2 (120) = 5993.25, p<.001. These statistics indicate there is common variance among the variables and an adequate sample for factor analysis.

Using WLSMV estimation, an EFA was conducted with an oblique (Promax) rotation method. Oblique rotation allows factors to be corelated and is warranted when factor correlations are >.32 (Tabachnick and Fiddell, 2007). The 16-item EFA ran with up to 4 factors. Table 6 presents the model fit indices of the 4 models.

Table 6

Exploratory Factor Analysis Model Fit Results

	Eigenvalues							
	F1	F2	F3	F4	$\chi 2$	df	RMSEA	RMSR
Model 1	6.851				2244.109**	104	0.14	0.112
Model 2	6.851	1.902			1215.45**	89	0.11	0.072
Model 3	6.851	1.902	1.381		513.605**	75	0.075	0.036
Model 4	6.851	1.902	1.381	0.873	163.94*	62	0.04	0.021

Note. N=1047. Promax rotated solution. F=Factor, df= degrees of freedom. RMSEA=root mean square error of approximation, RMSR=root mean square of residuals
*p<.05, **p<.001

The EFA models were assessed via the χ^2 test of model fit (p>.05, supports good fit), RMSEA (<.05 suggests adequate fit), and the eigen values. According to the Kaiser criterion, retained factors should have an eigenvalue greater than 1. Additionally, the rotated factor loadings, the factor structure, and the scree plot (the leveling out or elbow is often used to identify the best fitting factor structure) was used to assess whether the EFA results provided an underlying factor structure with adequate fit. Table 7 and Table 8 present the Promax rotated factor loadings (pattern matrix, partial regression coefficients), the factor-item correlations (structure matrix) and the item communalities of the 3 factor and 4 factor solutions, respectively.

Table 7

3-Factor Promax Rotated Loadings, Factor Structure, and Item Communalities

Dimension	Rotated Factor Loadings			Factor Structure			
Item	1	2	3	1	2	3	IC
Depression							
Depressed	0.872	0.098	-0.089	0.848	0.334	0.475	0.729
Lonely	0.778	-0.016	-0.074	0.729	0.197	0.391	0.535
Nervous	0.702	0.036	0.064	0.752	0.276	0.502	0.570
Dissatisfied	0.533	0.01	-0.022	0.523	0.166	0.305	0.274
Unfocused	0.490	0.002	0.406	0.736	0.303	0.703	0.646
Out of place	0.431	-0.075	0.342	0.614	0.184	0.574	0.447
Racing Thoughts	0.396	0.072	0.356	0.634	0.326	0.622	0.496
Insight							
Have MPs	0.144	0.905	-0.005	0.419	0.948	0.417	0.916
Need Rx	-0.087	0.769	-0.003	0.148	0.741	0.229	0.556
Need Tx	0.061	0.761	0.022	0.309	0.788	0.341	0.626
Paranoid							
Feel Suspicious	-0.008	-0.017	0.836	0.493	0.290	0.825	0.680
Act Suspicious	-0.066	-0.075	0.797	0.393	0.200	0.729	0.540
Hallucinate	-0.191	0.181	0.707	0.293	0.384	0.659	0.480
Forgetful	0.125	0.016	0.584	0.483	0.271	0.666	0.454
Feel Strange	0.235	-0.016	0.571	0.576	0.268	0.707	0.535
Indecisive	0.366	-0.035	0.483	0.648	0.257	0.692	0.563

Note. N=1047. Promax rotated solution. IC= Item Communalities

After considering these results, none of the models resulting from the EFA demonstrate sufficient fit to these data. First, both the 1 and 2 factor models are quickly disposed of, meeting only the eigenvalue greater than 1 criterion, but failing on all other fit indices. Second, despite, all factors of the 3-factor model having an eigenvalue of greater than 1, the χ^2 was significant, the RMSEA was greater than .05, and four items were cross loaded within .20, (factor 1 loads on Unfocused at .490 and factor 3 loads on Unfocused at .406, these are within .084; factor 1 loads on Racing Thoughts at .396 and factor 3 loads on Racing Thoughts at .356, these are within .04) . Similarly, the 4-factor structure has both a significant χ^2 and one of the four factors an eigenvalue less than one,

and although the RMSEA was less than .05, one item was cross loaded within .20 (factor 1 loaded on Out of Place at .466 and factor 2 loaded on Out of place at .407, these are within .059.

Table 8

4-Factor Promax Rotated Loadings, Factor Structure, and Item Communalities

Dimension	Rotated Factor Loadings				Factor Structure				
Item	1	IC	3	4	1	2	3	4	IC
Depression									
Lonely	0.828	-0.012	0.037	-0.118	0.771	0.208	0.407	0.412	0.60
Depressed	0.778	0.102	-0.095	0.134	0.840	0.350	0.453	0.589	0.73
Nervous	0.612	0.038	0.017	0.174	0.740	0.291	0.477	0.576	0.57
Dissatisfied	0.512	0.013	0.001	0.024	0.531	0.176	0.300	0.345	0.28
Out of Place	0.466	-0.078	0.407	-0.051	0.632	0.193	0.599	0.472	0.5
Insight									
Have MPs	0.107	0.913	-0.027	0.041	0.393	0.950	0.392	0.418	0.92
Need Rx	-0.079	0.775	0.011	-0.046	0.132	0.739	0.222	0.191	0.56
Need Tx	0.059	0.768	0.033	-0.023	0.293	0.789	0.331	0.310	0.63
Paranoid									
Act Suspicious	0.024	-0.074	0.822	-0.076	0.403	0.207	0.759	0.444	0.84
Feel Suspicious	0.038	-0.015	0.815	0.020	0.489	0.302	0.843	0.565	0.71
Hallucinate	-0.136	0.188	0.701	-0.029	0.284	0.393	0.677	0.408	0.5
Feel Strange	0.183	-0.017	0.489	0.177	0.553	0.280	0.696	0.600	0.54
Cognition									
Unfocused	0.148	-0.003	-0.056	0.836	0.632	0.321	0.564	0.890	0.81
Indecisive	0.055	-0.039	0.145	0.669	0.535	0.271	0.594	0.783	0.63
Fast Thoughts	0.211	0.074	0.140	0.423	0.571	0.341	0.557	0.671	0.52
Forgetful	-0.054	0.013	0.380	0.411	0.411	0.283	0.622	0.629	0.48

Note. N=1047. Promax rotated solution. IC= Item Communalities

Due to the failure to find a fitting model via CFA or EFA for the 16 items of mental distress, measurement invariance tests were not pursued as the evaluation of fit for poorly specified models is not recommended (see Sass et al., 2014). Additionally, although there are statistical procedures to address model misfit by reduction (eliminating items), adding paths (allowing items or factors to covary), or examining the factors separately, the pursuit of these methods was determined not to be supported by the

primary goal this study: to examine the impact of mental health court participation on mental health related outcomes. A mental distress construct is not necessary to achieve this goal, and these initial failures in model fit support a more direct approach of analysis to avoid promoting a factor model that is not generalizable or interpretable.

Alternate Analysis

As a result of the failure to identify an underlying mental distress model for the 16 items, regression analyses were proposed as an alternative method for answering the research questions. The remaining analyses were an adaption of the initial project aims 2-4. The following analyses describe the associations of relevant social status and connection variables (relationship status, family contact, employment status, and educational attainment) to mental distress outcomes. The alternate analyses also examined the effect of legal setting on mental distress outcomes overtime, controlling for participant characteristics and social stability variables. Finally, the main effects and interaction effects of motivation and coercion on mental distress outcomes were examined and discussed.

Baseline Equivalence

This researcher had concerns regarding the comparability between groups because of the study design, where the Time 1 interview was conducted after individuals had been admitted to the MHC. The proposed study would have identified substantial group differences on mental distress during the measurement invariance phase however with the alternate analysis plan a different method for examining baseline equivalence was pursued. Baseline equivalence is necessary when assessing treatment effects over time and for making comparison between treatment groups (Anderson & Maxwell, 2018).

Randomized controlled trials (RCTs) generally abate concerns of non-equivalence at baseline due to the randomization of treatment assignment, whereas quasi-experimental designs (QEDs) have more to overcome when asserting treatment effects by group comparison. The original design of this study aimed to match individuals on race, gender, mental illness diagnoses, and criminal status. Additionally, the outcomes of focus were neither longitudinal nor mental distress focused, rather the outcomes were objective public safety indicators (e.g., recidivism, treatment utilization, number of jail days etc.). Due to the intention to compare the effect of participating in mental health court on mental distress outcomes overtime against jail participation, baseline equivalence needed to be confirmed.

Using the Stata 15 software package, specifying Time 1, 16 mixed-effects logistic equivalency tests were conducted for each mental distress outcome, comparing the MHC participants against the Jail participants accounting for participant characteristics (age, gender, race), social status variables (educational attainment and employment status), social connection variables (relationship status and family contact), and diagnosis. Sample jurisdiction was also included in the model to account for potential non-independence due to jurisdiction sampling. Table 9 shows, when all other predictor variables are held constant, MHC participants were significantly less likely to score higher on most of the 16 mental distress outcomes compared to Jail participants at Time 1. For example, at Time 1, MHC participants are 3.14 times less likely to report higher levels of nervousness.[9] This finding presented a challenge to the appropriateness of

[9] Odds ratio of less than one is interpreted as "less" likely to report higher values of the DV, and is calculated by 1/OR (e.g., Nervous OR=.355, the probability of MHC participants reporting high on nervous is (1/.355) times "less" likely than Jail participants at time 1).

comparing legal setting impacts overtime. Additionally, five of the 16 regression analyses failed to converge due to a discontinuous region in the data and have been dropped from remaining analyses.[10] Nevertheless, 2 of the 16 mental distress variables (i.e., feeling out of place and need medication) demonstrated equivalence at Time 1, supporting further inquiry into legal setting effects over time for those two outcomes.

Table 9

Baseline Equivalence on Mental Distress Outcomes for Legal Setting

			95% CI	
Outcome	OR	SE	LB	UB
Out of Place	.743	117	.546	1.011
Need Rx	.713	170	.447	1.138
Lonely	.318*	.180	.105	.966
Nervous	.355*	.142	.162	.779
Depressed	.268*	.138	.098	.734
Dissatisfied	.412*	.171	.182	.929
Forgetful	.630*	.099	.463	.856
Acts Paranoid	.443*	.165	.214	.917
Feels Strange	.704*	.110	.519	.957
Fast Thoughts	.563**	.088	.415	.765
Feels Paranoid	.564**	.091	.411	.773

Note. Each equivalence test was done separately for each mental distress outcome at Time 1. OR=odds ratio, SE=standard error, CI=confidence interval, LB=lower bound, UB=upper bound, Rx=Medication, Tx=Treatment. Odds ratios less than 1 are interpreted as less likely.
*p<.05, **p<.001

[10] These items were further queried by reducing the number of predictors in the baseline model to identify which variables were causing convergence issues. During this process, 2 of the 5 models ran after removing the social variables, and another two ran after removing all the predictors except the legal setting. In contrast, one item did not run even in a fully reduced baseline model. Crosstabs of the dropped predictors suggest the misfit in the four reduced models may be due to small cells. Additionally, a test of parallel lines indicates a violation of the proportional odds assumption, which could indicate the DVs are not ordinal and should be treated as nominal. Due to these challenges, these items were dropped from further analysis.

Comparing Legal Setting Effects Over Time.

The results of the two mixed-effects logistic regression analyses for the frequency of feeling out of place and the current need for medication outcomes are reported in Table 10 and Table 11.

Table 10

Predicting Feeling Out of Place Among Jail and MHC Participants

			CI 95%	
	OR	SE	LB	UB
High Contact w/Family[a]	0.539*	0.145	0.318	0.913
MHC[b]	0.553*	0.126	0.354	0.863
Time 2[c]	0.485**	0.079	0.352	0.668
Mid MOT x Legal Coercion[d]	5.173*	4.276	1.024	26.141

Note. Observations=1119, n=565, Loglikelihood=-1687.4848, AIC=344.97, BIC=3620.676, ICC=.360, Wald's $\chi 2(30) = 72.60$, $p<.001$, OR=Odds Ratio, SE=Standard Error, CI=Confidence Interval, LL= Lower Limit, UL=Upper Limit, MHC=Mental Health Court; MOT=Motivation.
Displaying only significant associations. Not displayed, but included in the model are: Age, Gender, Asian, Black, Hispanic, Native American, White, Multiracial, Bipolar, Depression, Schizophrenia, Substance Use, Employment Status, Educational Attainment, Relationship Status, Family Contact (low), Family Contact (medium), MHC x Time, Motivation (low), Motivation (mid), Motivation (high), Legal Coercion, Coercion x Motivation (low), Coercion x Motivation (high).
[a]Compared to no family contact; [b]Compared to Jail; [c]Compared to Time 1; [d]Compared to No Motivation at No Coercion.
*p<.05, **p<.01

Table 10 and Table 11 show that the Time 2 reporting for higher levels of needing medication and feeling out of place is significantly less likely than at Time 1 (Need Medication (T2): OR=.277, 95% CI [.149-.517]) and (Out of place (T2): OR=.485, 95% CI [.352-.668]). However, the interaction term for Legal Setting and Time (MHC x Time2) was non-significant for feeling out of place. Suggesting the significant difference in outcome probabilities over Time does not depend on whether individuals are an MHC participant or Jail participant.

Table 11

Predicting Needing Medication Among Jail and MHC Participants

			CI	95%
	OR	SE	LB	UB
Younger[a]	0.300*	0.115	0.141	0.637
Bipolar[b]	3.083*	1.564	1.141	8.331
Schizophrenia[c]	5.395*	2.94	1.854	15.697
Time 2[d]	0.277*	0.088	0.149	0.517
MHC x Time 2[e]	3.213*	1.476	1.307	7.904

Note. Observations=1119, n=565, Loglikelihood=-1687.4848, AIC=344.97, BIC=3620.676, ICC=.360, Wald's $\chi 2(30) = 72.60$, $p<.001$, OR=Odds Ratio, SE=Standard Error, CI=Confidence Interval, LL= Lower Limit, UL=Upper Limit, MHC=Mental Health Court. MET=Motivation to engage in treatment.

Displaying only significant associations. Not displayed but included in the model are Gender, Asian, Black, Native American, White; Multiracial, Depression, Substance use, Employment Status, Educational Attainment, Relationship Status, Family Contact, Motivation, Coercion, Legal Setting, and Jurisdiction.

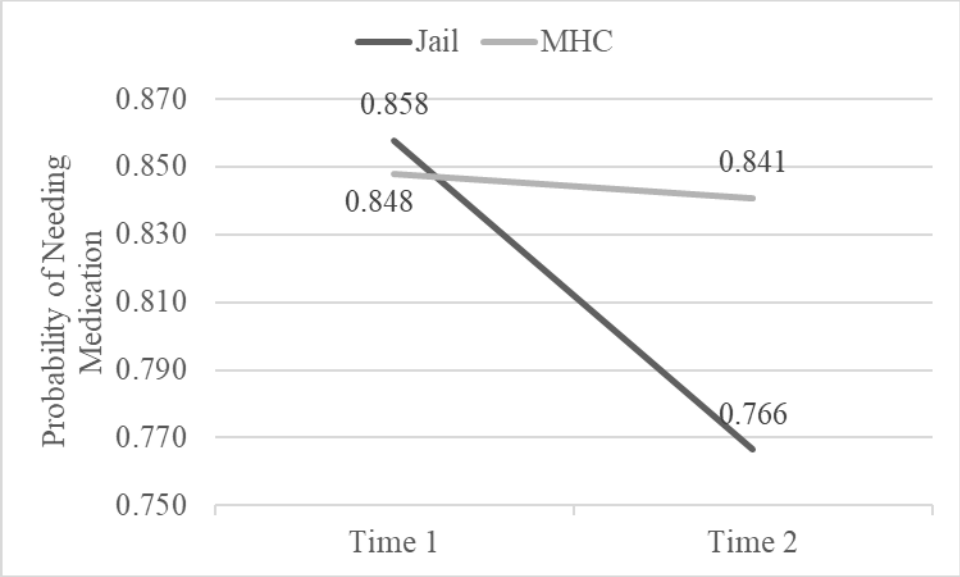
[a]Compared to aged 37 and older; [b]Compared to Not Bipolar; [c]Compared to not Schizophrenic; [d]Compared to Time 1; [e]Compared to Jail at Time 1.

*p<.05.

In contrast, the interaction term was significant for predicting individuals reporting needing medication (Table 11). Figure 3 presents the interaction of Legal Setting and Time for participants that report needing medication. At Time 1 Jail participants have a higher probability of reporting needing medication, however by Time 2 that probability drops by 9%. Whereas the change in probability among MHC participants is less than 1%.

Figure 2

Predicting Need Medication by Legal Setting Compared Over Time



Note. Marginal probabilities allow for a more intuitive interpretation of logistic regression results than using logistic regression coefficients (Norton, et al., 2019).

Participant Characteristics and Social Status Predictors.

High family contact was the only social variable to be significantly associated with either of the mental distress outcomes. Accordingly, the results for the mental distress outcome of feeling out of place (Table 10) shows individuals who report high contact with family are 1.86 times less likely to report high levels of feeling out of place than individuals that report no family contact (OR=.539 95% CI [.218-.913]). Two mental health diagnoses were positively associated with needing medication (Table 11), here individuals with a schizophrenia diagnosis were significantly more likely to report needing medication (OR=5.395, 95% CI [1.854-15.697]). Similarly, individuals with a bipolar diagnosis were significantly more likely to report needing medication (OR=3.083.479, 95% CI [1.141-8.331]). Age was also a significant predictor of needing

medication, individuals under the age of 37 were 3.33 times less likely to report a higher need for medication (OR=.300, 95% CI [.141-.637]).

Legal Coercion and Motivation.

Table 10 and Table 11 also present results including legal coercion and motivation to engage in treatment. Legal coercion was not significantly associated with needing medication or feeling out of place. Furthermore, the motivation and coercion interaction term was non-significant for the need medication outcome. However, the interaction term was significant for the feeling out of place outcome at mid-level motivation (OR=5.173, 95% CI [1.024-26.141]). These results indicate individuals with mid-level motivation to engage in treatment that endorse the legal coercion item are 5.173 times more likely to report higher frequency of feeling out of place, than those that are neither coerced nor motivated for treatment. Figure 3 demonstrates this interaction using the marginal probabilities at the highest level of feeling out of place.

Figure 3

Predicting Feeling Out of Place by Coercion and Motivation

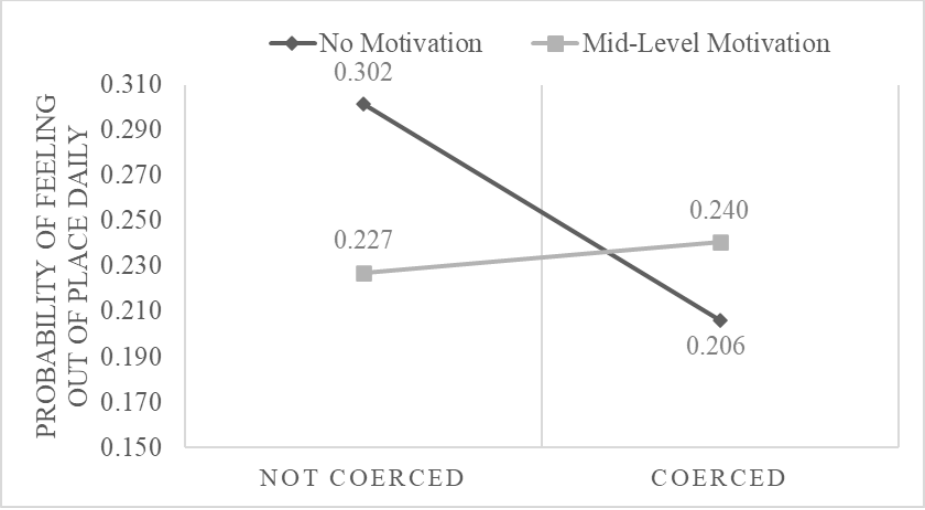


Figure 3 shows that the probability of an individual reporting the highest level of feeling out of place (at least daily) is significantly different depending on legal coercion. The probability of feeling out of place daily among individuals that are not motivated to attend treatment is greater among those that are legally coerced compared to those that are not coerced to treatment. In contrast, among individuals with some motivation the probability of individuals feeling out of place daily is not dramatically different depending on coercion status. There was no significant difference in the relationship between the motivation and coercion interaction term and the dependent variable when examined by legal setting or across time, indicating that the interaction between coercion and motivation does not depend on legal setting or time point.

Within Legal Setting Mixed Effects Logistic Regression

Overall, the baseline equivalence tests were nonsignificant suggesting these data are not suitable for group comparisons on mental distress outcomes. However, it was possible to examine the associations between participant characteristics and social status predictors and mental distress within legal setting. Mixed effects logistic regression analyses were conducted to examine the associations between participant characteristics and 9 mental distress outcomes (loneliness, nervousness, feeling depressed, life dissatisfaction, forgetfulness, feeling strange, having fast thoughts, feeling paranoid and acting paranoid). Additionally, these analyses assessed the main effects and interaction effects of motivation and coercion among adults with serious mental illness enrolled in mental health court. Results predicting each mental distress outcome are provided in Tables 12 through 19.

Frequency of Feeling Lonely.

Loneliness among mental health court participants is significantly associated with several predictors (Table 12). First, participants at Time 2 were less likely to report higher loneliness compared to Time 1 reporting (OR=0.717, 95% CI [0.519-0.989], p<.05). Next, two participant characteristic predicted loneliness outcomes. Individuals in a relationship were less likely to report higher loneliness than those not in a relationship (OR=0.381, 95% CI [0.214-.679], p<.05). A schizophrenia diagnosis also predicted reduced probability of reporting high loneliness compared to individuals without a schizophrenia diagnosis (OR=0.443, 95% CI [0.238-0.826], p<.05).

Table 12

Predicting Loneliness Among MHC Participants

			95% CI	
	OR	SE	LL	UL
Time 2[a]	0.717*	0.118	0.519	0.989
Relationship[b]	0.381*	0.112	0.214	0.679
Schizophrenia[c]	0.443*	0.141	0.238	0.826
Coercion[d]	0.100*	0.101	0.014	0.723
Motivation (High)[e]	0.175*	0.153	0.032	0.971
Coercion#Motivation (High)[f]	20.460*	21.950	2.499	167.525
Coercion#Motivation (Mid)[f]	10.798*	12.537	1.109	105.098
Coercion#Motivation (Low)[f]	13.229*	16.965	1.071	163.354

Note. Observations=557, n=279, Loglikelihood=-820.095, AIC=1706.19, BIC=1848.835, ICC=.373, Wald's $\chi^2(28)$ =59.51, p<.05, OR=Odds Ratio, SE=Standard Error, CI=Confidence Interval, LL= Lower Limit, UL=Upper Limit; OR=odds ratio; SE=standard error; LB=lower bound; UB=upper bound; CI=confidence interval. Displaying only significant associations. Predictors included in the model, but not displayed are Age, Gender, Asian, Black, Native American, Hispanic, White, Multiracial, Educational Attainment, Employment Status, Family Contact, Bipolar, Depression, Substance Use, Motivation (Low), Motivation (Mid), and Jurisdiction.
[a]Compared to Time 1, [b]Compared to single, [c]Compared to no schizophrenia, [d]Compared to no coercion, [e]Compared to no motivation, [f]Compared to no coercion at no motivation.
*p<.05

The main effects and interaction effects of coercion and motivation were also significantly associated with loneliness scores among mental health court participants. Individuals endorsing the legal coercion item were less likely to report loneliness than those reporting not being required to attend treatment by the legal system (OR=0.100, 95% CI [0.014-0.723], p<.05). Similarly, individuals endorsing high motivation were less likely to report higher levels of loneliness (OR=0.175, 95% CI [0.032-0.971], p<.05). However, the coercion and motivation interaction term predicted increased probability of individuals reporting higher levels of loneliness. Figure 4 presents the probability margins of the interaction among mental health court participants.

Figure 4

Predicting Loneliness by Coercion and Motivation

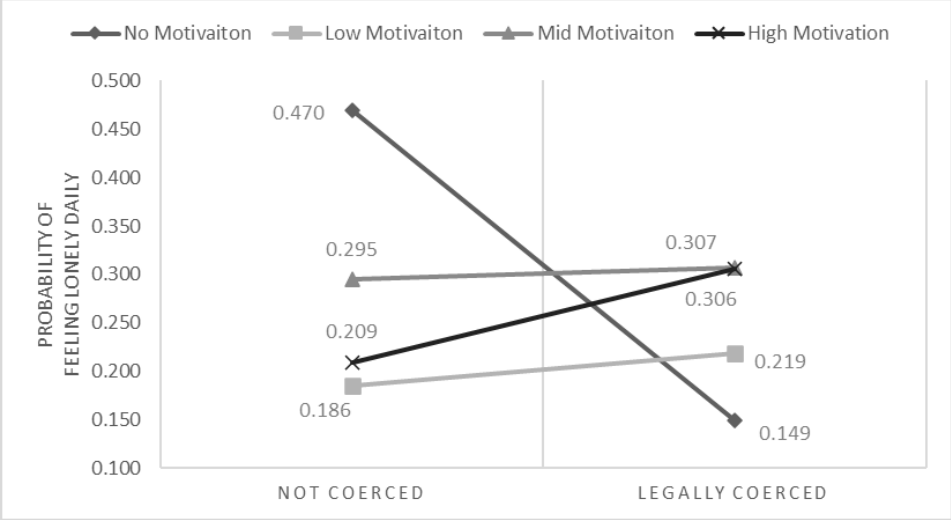


Figure 4 shows that the probability of an individual reporting the highest level of feeling lonely (at least daily) is significantly different depending on legal coercion and motivation level. The probability of feeling lonely daily among individuals who are not motivated to attend treatment is greater among those who are not legally coerced compared to those who are legally coerced to treatment. In contrast, among individuals

with Low to Mid levels of motivation the probability of individuals feeling lonely daily is not significantly different depending on coercion status. However, among MHC participants with high motivation, the probability of daily loneliness is higher among individuals reporting legal coercion. In an ancillary analysis, there was no significant difference in the relationship between the motivation and coercion interaction term and the dependent variable when examined across time, indicating that the interaction between coercion and motivation does not depend on time.

Frequency of Feeling Nervous.

Table 13 presents the significant associations for the frequency of feeling nervous among mental health participants. Nervousness outcomes were significantly predicted by time, where MHC participants were 2.44 times less likely to report frequent nervousness at Time 2 compared to Time 1 (OR=0.410, 95% CI [0.292-0.576], p<.001). A schizophrenia diagnosis also predicted reduced probability of frequent nervousness. Individuals with a schizophrenia diagnosis were 2.48 times less likely to report frequent nervousness than individuals without a schizophrenia diagnosis (OR=0.403, 95% CI [0.202-0.804], p<.05). The only other significant predictor of nervousness was motivation at the mid-level. Individuals who reported mid-level motivation were 8.1 times more likely to report frequent nervousness (OR=8.06, 95% CI [1.105-59.281], p<.05).

Table 13

Predicting Nervousness Among MHC Participants

			95% CI	
	OR	SE	LL	UL
Time 2[a]	0.410**	0.071	0.292	0.576
Schizophrenia[b]	0.403*	0.142	0.202	0.804
Motivation (Mid)[c]	8.063*	8.223	1.105	59.281

Note. Observations=557, n=279, Loglikelihood=-791.008, AIC=1648.015, BIC=1790.66, ICC=.458, Wald's $\chi^2(28)$ =72.38, p<.001, OR=Odds Ratio, SE=Standard Error, CI=Confidence Interval, LL= Lower Limit, UL=Upper Limit. Displaying only significant associations. Predictors included in the model, but not displayed are Age, Gender, Asian, Black, Native American, Hispanic, White, Multiracial, Educational Attainment, Employment Status, Family Contact, Bipolar, Depression, Substance Use, Motivation (Low), Motivation (High), Coercion, all levels of Coercion#Motivation, and Jurisdiction. [a]Compared to Time 1, [b]Compared to no schizophrenia, [c]Compared to no motivation. *p<.05 **p<.001

Frequency of Feeling Depressed.

Among MHC participants depressed outcomes were significantly associated with several predictors (Table 14). First, time was a significant predictor such that Time 2 depressed outcomes were 2.18 times less likely to be high, compared to Time 1. Suggesting that among MHC participants the frequency of feeling depressed decreased over time. Second, a schizophrenia diagnosis was negatively associated with depressed outcomes. Individuals with a schizophrenia diagnosis were 2.99 times less likely to report frequently feeling depressed, compared to those without schizophrenia. Additionally, participant racial identities were significantly associated with depressed outcomes. Individuals identifying as Black were 14.29 times less likely to report frequently feeling depressed, those with Asian identity were 14.5 times less likely, and individuals that identified as Native American were 8.13 times less likely to report frequently feeling depressed compared to individuals not of those racial identities. Finally, legal coercion was negatively associated with the frequency of feeling depressed. Among, MHC

participants individuals who endorsed the legal coercion item were 11.36 times less likely to report frequently feeling depressed compared to individuals reporting not being currently required by the legal system to go to treatment.

Table 14

Predicting Feeling Depressed Among MHC Participants

			95% CI	
	OR	SE	LL	UL
Time 2[a]	0.458**	0.079	0.327	0.643
Schizophrenia[b]	0.335*	0.132	0.155	0.723
Black[c]	0.070*	0.069	0.010	0.490
Asian[d]	0.069*	0.083	0.006	0.738
Native[e]	0.123*	0.127	0.016	0.926
Coercion[f]	0.088*	0.107	0.008	0.957

Note. Observations=557, n=279, Loglikelihood=-789.007, AIC=1644.014, BIC=1786.659, ICC=.544, Wald's $\chi^2(28)$ =73.69, p<.001, OR=Odds Ratio, SE=Standard Error, CI=Confidence Interval, LL= Lower Limit, UL=Upper Limit. Displaying only significant associations. Predictors included in the model, but not displayed are Age, Gender, Hispanic, White, Multiracial, Educational Attainment, Employment Status, Family Contact, Bipolar, Depression, Substance Use, Motivation (Low), Motivation (Mid), Motivation (High), all levels of Coercion#Motivation, and Jurisdiction.

[a]Compared to Time 1, [b]Compared to no schizophrenia, [c]Compared to not Black, [d]Compared to not Asian, [e]Compared to not Native, [f]Compared to no legal coercion.

*p<.05, **p<.001

Life Dissatisfaction.

In addition to Time, life dissatisfaction among MHC participants was significantly associated with several participant characteristics (Table 15). Time 2 predicts lower dissatisfaction among MHC participants compared to Time 1. A younger age, mental health diagnosis of schizophrenia, and Black racial identity were also negatively associated with dissatisfaction. Individuals under the age of 37 were 2.21 times less likely to report high dissatisfaction. Individuals with a schizophrenia diagnosis were 2.33 times less likely, and individuals who identified as Black were 7 times less like

to report higher levels of dissatisfaction. Social connection variables were also negatively associated with dissatisfaction outcomes. Individuals reporting high levels of family contact were 2.71 times less likely to report high dissatisfaction, and individuals in a relationship were 1.87 times less likely to report high dissatisfaction.

Table 15

Predicting Dissatisfaction Among MHC Participants

			95% CI	
	OR	SE	LL	UL
Time 2[a]	0.451**	0.073	0.328	0.621
Younger[b]	0.452*	0.122	0.266	0.768
Schizophrenia[c]	0.428*	0.140	0.225	0.814
Black[d]	0.142*	0.119	0.028	0.736
Family Contact (High)[e]	0.369*	0.159	0.159	0.857
Relationship[f]	0.536*	0.163	0.295	0.975

Note. Observations=556, n=279, Loglikelihood=-949.569, AIC=1969.138, BIC=2120.365, ICC=.429, Wald's $\chi^2(28)$ =70.19, p<.001, OR=Odds Ratio, SE=Standard Error, CI=Confidence Interval, LL= Lower Limit, UL=Upper Limit. Displaying only significant associations. Predictors included in the model, but not displayed are Gender, Hispanic, White, Asian, Native American, Multiracial, Educational Attainment, Employment Status, Bipolar, Depression, Substance Use, Motivation (Low), Motivation (Mid), Motivation (High), all levels of Coercion#Motivation, and Jurisdiction.

[a]Compared to Time 1, [b]Compared to age 37 and older, [c]Compared to not schizophrenia, [d]Compared to not Black, [e]Compared to no family contact, [f]Compared to single.

*p<.05, **p<.001

Frequency of Being Told Acting Paranoid.

Once again Time 2 demonstrated lower probability of high mental health distress, this time for mental health court participants reporting on the frequency of being told they are acting paranoid (Table 16). Individuals were 2.28 times less likely to report higher frequency of being told they were acting paranoid at Time 2 compared to Time 1. This mental health outcome was also significantly associated with several race identities. For both White (OR=0.035, 95% CI [0.002-0.575], p<.05) and Asian (OR=0.024, 95% CI

[0.001-0.593], p<.05) racial identity the probability of individuals reporting high frequency of being told they were acting paranoid was lower, compared to those not in those racial groups. In contrast, two mental health diagnoses proved to be positively associated with a higher frequency of being told acting paranoid. The told acting paranoid outcome was positively associated with bipolar (OR=3.366, 95% CI [1.37-8.269], p<.05) and depression (OR=2.688, 95% CI [1.018-7.099]. This result indicates that individuals with either a bipolar disorder or a depression disorder are more likely to report frequently being told they are acting paranoid. Finally, for this mental health related outcome, individuals with a high school diploma were less likely to report higher frequency being told acting paranoid (OR=0.479, 95% CI [0.242-0.951], p<.05).

Table 16

Predicting Told Acting Paranoid Among MHC Participants

			95% CI	
	OR	SE	LL	UL
Time 2[a]	0.437**	0.094	0.286	0.666
White[b]	0.035*	0.050	0.002	0.575
Asian[c]	0.024*	0.039	0.001	0.593
Bipolar[d]	3.366*	1.544	1.370	8.269
Depression[e]	2.688*	1.332	1.018	7.099
HS Diploma[f]	0.479*	0.168	0.242	0.951

Note. Observations=555, n=279, Loglikelihood=-542.4529, AIC=1150.906, BIC=1293.432, ICC=.498, Wald's $\chi^2(28)$ =49.26, p<.05, OR=Odds Ratio, SE=Standard Error, CI=Confidence Interval, LL= Lower Limit, UL=Upper Limit, HS=High School. Displaying only significant associations. Predictors included in the model, but not displayed are Age, Gender, Black, Hispanic, Native American, Multiracial, Relationship Status, Employment Status, Family Contact, Substance Use, Schizophrenia, Motivation (Low), Motivation (Mid), Motivation (High), Coercion, all levels of Coercion#Motivation, and Jurisdiction.

[a]Compared to Time 1, [b]Compared to not White, [c]Compared to not Asian, [d]Compared to not bipolar, [e]Compared to not Depression, [f]Compared to no HS diploma.

*p<.05, **p<.001

Frequency of Forgetfulness, Racing Thoughts, Feeling Strange, and Feeling Paranoid.

The remaining four models for the mental health related outcomes of forgetfulness, racing thoughts, feeling strange, and feeling paranoid, had few significant predictors. Consistent with the other mental health related outcomes, Time 2 predicted less distress compared to Time 2. Results are presented in Table 17-Table 20. Apart from time, the social stability variable of educational attainment was the only other significant predictor, and only for forgetfulness (Table 17) and frequency of having racing thoughts (Table 18). These results indicate that individuals with a high school diploma or equivalent are 2 times less likely to report frequently feeling forgetful and 2.6 times less likely to report frequently having racing thoughts compared to individuals who do not have a high school diploma.

Table 17

Predicting Forgetfulness Among MHC Participants

			95% CI	
	OR	SE	LL	UL
Time 2[a]	0.702*	0.117	0.507	0.972
HS Diploma	0.499*	0.305	0.558	1.823

Note. Observations=557, n=279, Loglikelihood=-790.834, AIC=1647.668, BIC=1790.313, ICC=.410, Wald's $\chi^2(28)$ =47.06, p<.05, OR=Odds Ratio, SE=Standard Error, CI=Confidence Interval, LL= Lower Limit, UL=Upper Limit, HS= High School. Displaying only significant associations. Predictors included in the model, but not displayed are Age, Gender, Black, Hispanic, White, Asian, Native American, Multiracial, Relationship Status, Employment Status, Family Contact, Bipolar, Depression, Substance Use, Schizophrenia, Motivation (Low), Motivation (Mid), Motivation (High), all levels of Coercion#Motivation, and Jurisdiction.
[a]Compared to Time 1, Compared to no HS Diploma.
*p<.05

Table 18

Predicting Racing Thoughts Among MHC Participants

			95% CI	
	OR	SE	LL	UL
Time 2[a]	0.497**	0.086	0.354	0.696
HS Diploma[b]	0.390*	0.116	0.218	0.698

Note. Observations=557, n=279, Loglikelihood=-807.4801, AIC=1680.96, BIC=1823.605, ICC=.445, Wald's $\chi^2(28) = 58.51$, p<.001, OR=Odds Ratio, SE=Standard Error, CI=Confidence Interval, LL= Lower Limit, UL=Upper Limit. Displaying only significant associations. Predictors included in the model, but not displayed are Age, Gender, Asian, Black, Hispanic, Native American, Multiracial, Relationship Status, Employment Status, Family Contact, Bipolar, Depression, Substance Use, Schizophrenia, Motivation (Low), Motivation (Mid), Motivation (High), Coercion, all levels of the Coercion#Motivation interaction, and Jurisdiction.
[a]Compared to Time 1, Compared to no HS Diploma.
*p<.05 **p<.001

Table 19

Predicting Feeling Strange Among MHC Participants

			95% CI	
	OR	SE	LL	UL
Time 2[a]	0.522**	0.087	0.376	0.724

Note. Observations=555, n=279, Loglikelihood=-810.0562, AIC=1686.112 BIC=1828.698, ICC=.399, Wald's $\chi^2(28) = 38.14$, p=.0958, OR=Odds Ratio, SE=Standard Error, CI=Confidence Interval, LL= Lower Limit, UL=Upper Limit. Displaying only significant associations. Predictors included in the model, but not displayed are Age, Gender, Asian, Black, Hispanic, Native American, Multiracial, Educational Attainment, Relationship Status, Employment Status, Family Contact, Bipolar, Depression, Substance Use, Schizophrenia, Motivation (Low), Motivation (Mid), Motivation (High), Coercion, all levels of Coercion#Motivation, and Jurisdiction.
[a]Compared to Time 1
*p<.05 **p<.001

Table 20

Predicting Feeling Paranoid Among MHC Participants

			95% CI	
	OR	SE	LL	UL
Time 2[a]	0.671*	0.121	0.471	0.954

Note. Observations=555, n=279, Loglikelihood=-732.2185, AIC=1530.437, BIC=1672.963, ICC=.491, Wald's $\chi^2(28)$ =26.98, p=.5196, OR=Odds Ratio, SE=Standard Error, CI=Confidence Interval, LL= Lower Limit, UL=Upper Limit. Displaying only significant associations. Predictors included in the model, but not displayed are Age, Gender, Asian, Black, Hispanic, Native American, Multiracial, Educational Attainment, Relationship Status, Employment Status, Family Contact, Bipolar, Depression, Substance Use, Schizophrenia, Motivation (Low), Motivation (Mid), Motivation (High), Coercion, all levels of the Coercion#Motivation interaction, and Jurisdiction.

[a]Compared to Time 1

*p<.05

Chapter 4: Discussion

The purpose of this study was fourfold. First, it sought to establish a measure of mental distress among adults with serious mental illness in a legal setting. Second, to account for the impact of participant characteristics, social status and social connection variables, and mental health diagnoses on mental distress outcomes. Third, this study sought to gain a better understanding of the effect of mental health court participation on mental distress outcomes over time. And finally, to assess the effect of motivation and legal coercion on that relationship.

Misfit of a Mental Distress Model

The proposed model failed to fit the McArthur Mental Health Court Study data, and the exploratory factor analysis failed to identify an underlying structure to the 16 mental distress items. There are likely many reasons for the failure of the proposed model to fit the data, one reason being the proposed single factor model was likely too restrictive for the 16 items. For example, given the high correlation between items, the proposed model likely omitted paths between the indicators. The exploratory factor analysis aimed to resolve these issues but was also unsuccessful. Despite obtaining results for a four-factor model where the factors loaded on items with logical domains (i.e., Depression, Insight, Paranoid, Cognition) the fit indices suggested inadequate fit. The possible reasons for the misfit of the models resulting from the EFA are broad ranging, from issues with the items themselves (e.g., violation of the proportional odds assumption, difference in scaling) to the selected statistical methods (e.g., using oblique rather than orthogonal rotation) or an underdeveloped theory or the fact that the measures employed were never designed to represent a unidimensional scale.

Item-level

In the case of these data the outcome items were treated as ordinal, which was supported by them being Likert type items. For non-continuous variables a logistic function is used to create a regression line that can be interpreted similarly to the way a linear continuous model would be interpreted. However, this analysis assumes proportional odds, or parallel lines, which means the calculated logistic function has cut offs that designate the levels of each item response option. The assumption is that the predictors will have a parallel relationship with each of those cut offs. A violation of the assumption may mean the responses are more nominal than ordinal, which would call for a different analysis method. For additional reading on proportional odds see McNulty, (2021). Another item level consideration would be the difference in the scaling of the mental health related items, eight of the items were on a scale from 0-5, three items were on a scale 0-4, and one item had a scale of 0-6. The difference in scale structure along with undetected violations of the proportional odds assumption may have contributed to the resulting model misfit.

Method-level

Alternatively, if not the items, then the statistical methods used may have led to the rejection of the model. First, this author wanted to avoid encouraging the generalizing of a poor model and thus used conservative standards for assessing model fit. Accordingly, the models resulting from the EFA could be pursued under less conservative cut offs for fit. Additionally, rather than treating the outcome variables as continuous, which is a common practice (Lubke & Muthén, 2004), this author used methods recommended for ordinal outcomes. This approach required less common and

more complex analysis, which may have resulted in errors in statistical approach and decision making. Finally, the model misfit could be due to an underdeveloped theory or poor measurement of the indicators. The theory for an underlying mental distress factor was constrained by the original study measures and interview items. Subsequently, the proposed model was constructed from three previously developed scales used to assess mental health symptoms, mental health insight, and life satisfaction. Although the original scales have been validated in prior studies, they have not been used in similar populations as the current sample and were not designed to measure a single unidimensional construct of mental distress.

An Alternate Analysis of Secondary Data

Had a model of mental distress been identified, measurement invariance across participant characteristics as well as social status and social connection variables would have been tested. However, the alternate analyses allowed for examination into the association of these predictors with the mental distress outcomes.

Non-equivalence at Baseline

A major limitation to this study was the sampling design, where Time 1 interviews happened after individuals had been admitted into the MHC. When holding all other predictor variables constant, it was found that MHC participants were significantly less likely to score higher on most of the 16 mental distress outcomes compared to Jail participants at Time 1. The lack of baseline equivalence and consistently lower mental distress among MHC is likely due to the study design. In this study, the baseline interview occurred after individuals were enrolled in the mental health court. This finding prevents any inference into the effect of MHC compared to Jail on mental distress

outcomes. Rather, the lower scores of distress among MHC participants at Time 1, could indicate there were uncaptured treatment effects (e.g., participants benefited from the MHC condition upon enrollment and before the Time 1 interview). However, it could also be that there is a selection bias in MHC admissions, such that individuals with less severe mental distress are more likely to be engaged in mental health court. A potential solution to the non-equivalence at baseline would be to use a method for matching the participants, such as propensity score matching. However, such methods require complex data manipulation and are often susceptible to researcher bias (see Guo et al., 2020). Ideally, a true baseline interview would occur before MHC enrollment, so that the impact of legal setting would be more interpretable.

Two Mental Health Outcomes with Baseline Equivalence.

Of the two mental distress outcomes that had demonstrated baseline equivalence (need medication and feeling out of place), there was a negative relationship between family contact and feeling out of place. This finding provides some support to the hypothesis that social connection is protective against mental distress among adults with serious mental illness who are involved with the criminal legal system. Furthermore, this relationship was significant regardless of legal setting; thus, it may be helpful for legal system professionals to support and incorporate more opportunities for family contact for adults with serious mental illness who are either in Jail or participating in mental health court. This finding aligns well with research related to the value of having engaged natural supports (aka family) for individuals with developmental disabilities who return to the community after a period of civil commitment (see Hammerman, 2001). Nor is it an entirely new concept among those working to address the overrepresentation of

individuals with mental illness and substance use disorders in the criminal legal system (Council of State Governments, 2002). For example, the Mental Health Consensus Project report endorses the involvement of family at every level of planning and service delivery, because not only does their experience inform system improvements, but family members of service utilizers also facilitate accountability, including keeping track of appointments and promoting medication compliance.

The interaction of motivation and coercion was significantly associated with the mental health related outcome of feeling out of place. Individuals no motivation, have a greater probability of reporting high frequency of feeling out of place when not legally coerced. However, when mid-level motivation is reported the probability of reporting in the highest category (daily) of feeling out of place is lower among those not coerced compared to individuals that are legally coerced. This finding points to some interaction effects between coercion and motivation and could be interpreted to mean a combination of things. First, the finding that coercion with no motivation results in lower probability of frequently feeling out of place, may indicate the individual is not experiencing this type of mental distress, and thus is not reporting it despite being required to go to treatment. Alternatively, this finding may indicate a benefit of system referral, where the individual was connected with treatment which has reduced distress, despite not having motivation for treatment. Second the finding that an endorsement of the coercion item along with any motivation (some, mid-level, high) has higher probability of reporting frequently feeling out of place, may indicate greater severity of mental distress. Whereby, both the individual and the system recognize the need for treatment. Further investigation

should be conducted to expand on this finding to determine whether a causal relationship exists.

Predicting Mental Distress Among MHC Participants

When examining mental distress outcomes among only the mental health court participants, the participant characteristics, social variables, legal coercion status, and motivation level varied in significance and relationship.

Participant Characteristics.

Age was generally not significantly associated with mental distress outcomes when all other predictors were held constant. In fact, age was only significantly associated with one distress outcome: life dissatisfaction. Individuals aged 36 or younger were less likely to report high dissatisfaction compared to older MHC participants. The relationship between age and criminal system involvement has been discussed in studies looking at recidivism, however fewer studies have considered the health and wellness outcomes of older individuals that are involved in the criminal legal system. In a systematic review and meta-analysis, Solares, et al., 2020 found few studies on mental health that allowed comparison by age, however the two that did, found a non-significant association between age and risk of depression. Clearly, this is an understudied population. Of concern is the median age of individuals who are involved in the legal system, more specifically, the median age of individuals in state prison, has risen over the past 20 years, from 30 years old to 36 years old (Carson & Sabol, 2013). However, more recent census data continue to show a higher rate of incarceration among persons aged 25 to 34 compared to individuals ages 35 to 44. Additional research into the clinical needs and incarceration rate of older individuals who have serious mental illness is needed.

Gender was not significantly associated with any of the nine mental distress outcomes. However, several *Race* identities were significant predictors of frequency of feeling depressed, life dissatisfaction, and frequency of acting paranoid. First, Black, Asian, or Native American identity predicted lower frequency of feeling depressed. Second, Black identity predicted lower life dissatisfaction. Finally, White identity and Asian identity predicted lower frequency of being told acting paranoid. Research on the prevalence of racial disparities in the criminal legal system is ongoing (see Kovera, 2019; Rucker & Richeson, 2021; and Vélez & Peguero, 2023). Similarly, race disparities in mental health court is under examination. For example, Gaba et al., (2022) examined the differences in behavioral health and legal system outcomes of mental health court participants by race and ethnicity. Gaba et al., (2002) found that race was significantly associated with reporting of current and lifetime serious mental illness, use of illicit substances, number of treatment attempts, and rearrest. In contrast to the findings in this study, Gaba et al., (2022) found that non-White racial and ethnic identities were associated with poorer mental health symptoms. A potential reason for the difference in these findings is in the measures used to assess mental health outcomes. Gaba et al., (2022) used the Behavior and Symptom Identification scale (BASIS-32: Eisen et al., 1994), and the Posttraumatic Stress Disorder Checklist-Civilian version (PCL-C; Weathers et al., 1991); whereas the mental health outcomes in the current study came from the Colorado Symptom Inventory (CSI), Treatment Attitudes and Insight Questionnaire (TAIQ), and a single-item life satisfaction question. The BASIS-32 and PCL-C have both been validated in diverse racial and ethnic samples, whereas the selected items from the CSI, TAIQ, and life satisfaction items have not been validated as

a whole in any population and have mixed validity across race groups individuals (See Boothroyd & Chen, 2008; Mohamed, et al., 2009; and Beuningen, 2012). Additionally, research into the racial and ethnic differences in outcomes among adults with serious mental illness in a legal setting is recommended, and such research should select assessments that have been validated in diverse samples.

Several mental health *diagnoses* proved to be significant predictors of some of the mental distress outcomes. A schizophrenia diagnosis was a significant predictor for lower levels of loneliness; nervousness; feeling depressed; and life dissatisfaction. Whereas a bipolar or depression diagnosis was significantly associated with the told acting paranoid outcome. Of note here is that a bipolar or a depression diagnosis were positively associated with the frequency of being told acting paranoid, whereas the significant association between schizophrenia and loneliness, nervousness, feeling depressed, and life dissatisfaction was a negative association. This result indicates that individuals with a schizophrenia disorder are reporting less mental distress. This finding supports a need for a more nuanced approach to evaluation and assessment of distress among individuals in mental health court who have a schizophrenia diagnosis.

Social Stability and Connection.

Relationship status was significantly associated with several of the mental health outcomes. First, individuals reporting being in a relationship were less likely to report high levels of loneliness compared to individuals not in a relationship. Similarly, individuals in a relationship were less likely to report high levels of life dissatisfaction. *Educational Attainment* was also negatively associated with several mental distress outcomes. Individuals with a high school diploma were less likely to report higher

frequency of racing thoughts; being told acting paranoid; and forgetfulness compared to those without a high school diploma. *Employment Status* was not significantly associated with any of the mental distress outcomes. However, *Family Contact* at the high level, was negatively associated with life dissatisfaction outcomes, indicating that individuals that frequently talk or get together with their family are less likely to report higher levels of life dissatisfaction. These findings are in line with this study's hypothesis that social stability and social connection are protective as presented in Chapter 1.

Motivation and Coercion Main Effects.

Motivation had multiple levels and was significantly associated with a couple of the mental distress outcomes at different levels of motivation. First, high motivation had a significant negative association with frequency of loneliness whereas mid-level motivation had a significant positive association with the frequency of feeling nervous. These conflicting findings encourage a careful approach to interpreting the effect of motivation on mental distress outcomes. *Coercion* was significantly associated with two mental distress outcomes. First, coercion was negatively associated with loneliness. Second, coercion was also negatively associated with the frequency of feeling depressed. These findings are in direct contradiction with the hypothesis, where coercion was expected to predict worse mental distress outcomes among adults with serious mental illness in a criminal legal setting. However, a potential reason for this finding could be in the measurement of coercion. Here participants were asked if they were currently required by the legal system to go to treatment. Despite being a criterion of mental health court, only a third of the mental health court participants reported having a legal system requirement to go to treatment. Thus, upon reflection, this item could be measuring more

than objective legal coercion. On one end, endorsing the coercion item could be an indication of the severity of mental health problems, and that the individual is aware of their need for treatment because of the court requirement; alternatively, the failure to endorse the legal coercion item could be due to a lack of knowledge of the legal requirement in combination with a lack of insight in to the need for treatment due to the severity of mental health problems and or distress. Measuring the effect of coercion to treatment on outcomes among individuals involved in the legal setting has been attempted numerous times (Farabee, et al., 1998; Pratt, et al., 2013; Wolfe et al., 2013; Van Dorn et al., 2006) and in a range of formats (perceived coercion, legal coercion, external/internal coercion, system leverage, etc.) and for a range of outcomes (perceptions of recovery, criminal recidivism, substance use behaviors, etc.). Farabee, et al., (1998) synthesized the findings of 11 coercion studies from 1977 to 1996, whereby the effect of coercion on outcomes was mixed. However, as hypothesized in the current study, Pratt, et al., (2013) found that perceived coercion was negatively associated with recovery perceptions, and Van Dorn et al., (2006), who operationalized different types of system pressure (criminal legal, private or public programs) as a form of 'leverage', found that individuals experiencing multiple types of leverage predicted increased experience of barriers to treatment for persons with serious mental illness. In contrast, but in line with this study's findings, Wolfe, et al., (2013) found no association between coercion (legal, objective or perceived) and treatment outcomes.

Motivation and Coercion Interaction Effects.

Among mental health court participants, the joint effect of motivation and coercion on mental distress outcomes provided very little predictive value. In fact, after

participant characteristics, social variables, and time were accounted for, the interaction of coercion and motivation was predictive only for loneliness outcomes. The findings showed that at all levels of motivation, when individuals were legally coerced to treatment, they were more likely to report high levels of loneliness compared to individuals with no motivation and no legal coercion. The interpretation of this finding is challenging. Although it does support the hypothesis that legal coercion would be associated with worsened outcomes, it appears that the higher the level of motivation the more likely a person is to report high levels of loneliness (i.e., coerced individuals who report high motivation are 20.5 times more likely to report high loneliness). A possible reason for this finding could be that the motivation item is measuring more than previously thought. The motivation item asks on a 5-point scale from very true to not at all true, how true is the statement "I chose to go to treatment because I was interested in getting help." In addition to measuring the individual's internal motivation for treatment, this item also may be measuring an individual's recognition or acknowledgment of a need for treatment. Whereby, individuals who experienced distress and recognized that treatment could help, endorsed this item. Measurement challenges are not unique to this study or even to studies focused on issues of motivation to treatment (see Jochems et al., 2014). Regardless, the findings of the current study support increased consideration when developing study measures and interview questions for purposes of assessing internal motivation for treatment.

Limitations

First, secondary data analysis has innate limitations such as the measurement selection, outcomes of interest, and participant recruitment procedures of the original

study design. Here the study originating the data, sought to examine associations between mental health court participation and post study outcomes including recidivism and community treatment utilization. Whereas the current study aimed to examine the effect of mental health court participation on individual mental health outcomes as measured over time. Reconceptualizing the mental health court study data to answer the research questions of this study required a creative approach, such as parsing out items from various measures to develop a model of mental distress. Furthermore, secondary data analysis is vulnerable to unforeseen data problems such as missingness or entry errors as the data collection and data entry process may not be comprehensively recorded and raw data records are unavailable for authentication. Missingness in this data set is a serious limitation of this study, which sought to examine the change in mental distress overtime. A third of the study sample was missing at the second time point, which puts the findings of this study in question, although the pattern of missingness was explored, as describe in Chapter 2. Finally, in this sample, racial disparities in the representation of individuals in the mental health court were present, such that Native Americans were significantly less likely to be enrolled in mental health court compared to those not identifying as Native American.

Future Directions

Operationalizing coercion is consistently one of the biggest challenges in this area of study, and many authors have advocated for alternative language (e.g., Bonnie and Monahan (2005) supported reframing coercion in terms of contract law). However, the findings of the current study along with the array of findings from prior research on the effect of coercion on outcomes among individuals with serious mental illness who are

involved in the criminal legal setting continue to fall short in their effort to reconcile the potential benefits and theoretical risks of leveraging legal authority to connect individuals to needed treatment with the ethical principles of beneficence and personal choice that are encapsulated in the professional ethics of those providing treatment. Thus, additional research is needed which targets the mental health outcomes and treatment effects of court supervised mental health court engagement. Considerations in designing these studies may include other groups of comparison. Rather than comparing a mental health court sample to a jail sample, comparing outcomes among a sample in which the legal system retains no authority over the individual.

Additionally, future research should consider methods which account for the known racial disparities prevalent in the criminal legal system. Particularly, the processes where individuals are identified as eligible for mental health court and subsequently referred.

Conclusion

Prior research into the impact of mental health courts has focused more on criminal legal system outcomes, such as recidivism, arrest days, service utilization, and costs. In contrast, this study investigated mental distress outcomes. The primary aim was to assess the impact of mental health court participation on mental distress outcomes among adults with serious mental illness in a legal setting. Unfortunately, a proposed model of mental distress failed to fit the McArthur Mental Health Study data. However, on the well contested issue of the effect of coercion and motivation on outcomes, this study supports a practical approach.

More courts are engaging in therapeutic jurisprudence and leveraging the authority of the court to engage individuals in mental health treatment, in the hope that access to needed mental health services will reduce the likelihood of individuals reentering the criminal legal system.

So, while the clinician is entitled to maintain an ethical stance in opposition to legally coerced treatment, the reasonableness of the practice remains. Particularly in a world where the criminal legal system is the largest mental health provider and where individuals with SMI would otherwise not receive access to needed treatment.

However, a practical approach does not negate the obligation to aspire toward a system where legal coercion for treatment is rendered unnecessary. Such a system can be imagined. For example, investing in resources and community-based programing where individuals with SMI are identified and connected to treatment services before criminal legal system involvement.

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Appendix

Colorado Symptoms Index (CSI) and Functioning

Now I am going to ask you some more questions about any psychological or emotional difficulties that you may have had. I am going to ask you how often you experienced certain problems during the past month. For each problem I mention, I'll ask you to look at this list of choices *[Show RESPONSE CARD #10]* **and pick one that best describes how often you have had the problem in the past month.** *[Interviewer: Use Calendar to orient Respondent to this time frame.]*

		At least every day	Several times a week	Several times during the month	Once during the month	Not at all	NA	RF	DK
12.1	**In the past month, how often have you felt nervous, tense, worried, frustrated or afraid?**	4 1	3 2	2 3	1 4	0 5	7	8	9
12.2	**In the past month, how often have you felt depressed?**	1	2	3	4	5	7	8	9
12.3	**In the past month, how often have you felt lonely?**	1	2	3	4	5	7	8	9
12.4	**In the past month, how often have others told you that you acted "paranoid" or suspicious"?** ***[If NOT AT ALL, SKIP to 12.5]***	1	2	3	4	5*	7	8	9
	~~12.4a Did this happen ONLY after you drank alcohol or took drugs?~~	NO	YES				7	8	9
12.5	**In the past month, how often did you hear voices, or hear or see things that other people didn't think were there?** ***[If NOT AT ALL, SKIP to 12.7]***	1	2	3	4	5*	7	8	9
	~~12.5a Did this happen ONLY after you drank alcohol or took drugs?~~	NO	YES				7	8	9
12.6	~~**In the past month, how often did your [voices], or [things that you see/hear], interfere with your doing things?**~~ ~~***[Refer to what is mentioned in the above question]*** ~~***[If NOT AT ALL, SKIP to 12.7]***~~	~~1~~	~~2~~	~~3~~	~~4~~	~~5*~~	~~7~~	~~8~~	~~9~~
	~~12.6a Did this happen ONLY after you drank alcohol or took drugs?~~	NO	YES				7	8	9
12.7	***[Read slowly]*** **In the past month, how often did you have trouble making up your mind about something, like deciding where you wanted to go or what you wanted to do, or how to solve a problem?**	1	2	3	4	5	7	8	9
*Indicates SKIP PATTERN									

		At least every day	Several times a week	Several times during the month	Once during the month	Not at all	NA	RF	DK
12.8	*[Read slowly]* **In the past month, how often did you have trouble thinking straight, or concentrating on something you needed to do like worrying so much, or thinking about problems so much that you can't remember or focus on other things?**	1	2	3	4	5	7	8	9
12.9	**In the past month, how often did you feel that your behavior or actions were strange or different from that of other people?** *[If NOT AT ALL, SKIP to 12.10]*	1	2	3	4	5*	7	8	9
	~~12.9a Did this happen ONLY after you drank alcohol or took drugs?~~	NO	YES				7	8	9
12.10	**In the past month, how often did you feel out of place, like you didn't fit in?**	1	2	3	4	5	7	8	9
12.11	**In the past month, how often did you forget important things?**	1	2	3	4	5	7	8	9
12.12	**In the past month, how often did you have problems with thinking too fast (thoughts racing)?** *[If NOT AT ALL, SKIP to 12.13]*	1	2	3	4	5*	7	8	9
	~~12.12a Did this happen ONLY after you drank alcohol or took drugs?~~	NO	YES				7	8	9
12.13	**In the past month, how often did you feel suspicious or paranoid?** *[If NOT AT ALL, SKIP to 12.14]*	1	2	3	4	5*	7	8	9
	~~12.13a Did this happen ONLY after you drank alcohol or took drugs?~~	NO	YES				7	8	9
12.14[†]	~~In the past month, how often did you feel like hurting or killing yourself?~~	1	2	3	4	5	7	8	9
12.15	~~In the past month, how often have you felt like seriously hurting someone else?~~	1	2	3	4	5	7	8	9

*Indicates SKIP PATTERN

Insight and Loss of Consciousness

I will now be talking about problems people may have with their mental health, or with drug and alcohol abuse. Some people talk about mental health problems using words like emotional problems, psychiatric problems, worry problems, or nerves. When I talk about mental health problems, I mean any of these things.

I'd like your opinion about problems you may have had and the treatment for those problems.

[Interviewer: READ ALL RESPONSE OPTIONS ALOUD FOR EACH QUESTION and ask Respondent to choose the option that best represents their answer.]

		No	Possibly Yes	Yes	NA	RF	DK
~~4.1~~	~~Have you at any time had mental problems that were different from most other people's?~~	~~0~~	~~1~~	~~2~~	~~7~~	~~8~~	~~9~~
~~4.2~~	~~Have you at any time needed treatment, such as hospitalization or outpatient care, for mental problems?~~	~~0~~	~~1~~	~~2~~	~~7~~	~~8~~	~~9~~
4.3	Do you now have mental problems?	0	1	2	7	8	9
4.4	Do you now need treatment, such as hospitalization or outpatient care, for mental problems?	0	1	2	7	8	9
~~4.5~~	~~Is it possible that in the future you may have mental problems?~~	~~0~~	~~1~~	~~2~~	~~7~~	~~8~~	~~9~~
~~4.6~~	~~Will you in the future need continued treatment, such as outpatient care or, possibly, hospitalization for mental problems?~~	~~0~~	~~1~~	~~2~~	~~7~~	~~8~~	~~9~~
~~4.7~~	~~Have you at any time needed to take medications for mental problems?~~	~~0~~	~~1~~	~~2~~	~~7~~	~~8~~	~~9~~
4.8	Do you now need to take medication for mental problems?	0	1	2	7	8	9
~~4.9~~	~~Will you in the future need to take medications for mental problems?~~	~~0~~	~~1~~	~~2~~	~~7~~	~~8~~	~~9~~
~~4.10~~	~~Will you in the future take the medications?~~	~~0~~	~~1~~	~~2~~	~~7~~	~~8~~	~~9~~
~~4.11~~	~~Do the medications do you any good?~~	~~0~~	~~1~~	~~2~~	~~7~~	~~8~~	~~9~~

Life Satisfaction

Please look at this scale. *[Show Respondent **RESPONSE CARD #9**]* **This is called the Delighted-Terrible Scale. The scale goes from Terrible, which is the lowest ranking of 1, to Delighted, which is the highest ranking of 7. There are also points 2 through 6 which are…** *[read response options for points 2 through 6 on scale.]* **All you have to do is tell me what point on the scale best describes how you feel.**

10.1 **How do you feel about your life as a whole?**

01 Terrible
02 Unhappy
03 Mostly Dissatisfied
04 Mixed
05 Satisfied
06 Mostly Pleased
07 Delighted
97 NA
98 RF
99 DK

Treatment Motivation

*[If Respondent received NO mental health and NO substance abuse treatment (5.4 and 5.5) **AND** no MH/SA medications (6.1) since Six Months Prior to Entry Date, ask **ONLY** 8.1 and 8.2 **USING THE QUESTIONS IN BRACKETS**.]*

This questionnaire concerns people's reasons for entering treatment and their feelings about treatment. By treatment, I mean mental health, alcohol or drug treatment or medication management. Different people have different reasons for entering treatment, and we want to know how true each of these reasons is for you. Please indicate how true each reason is for you, using this scale *[Show **RESPONSE CARD** #7].* **Please use the ENTIRE SCALE from 1 to 7 for your response.**

*[Interviewer: Stress to the Respondent that s/he should **USE THE ENTIRE SCALE from 1-7**; if it appears the Respondent does not understand, explain the concept again. If it appears that the Respondent is only using 1, 4 and 7, check to see if s/he is using the entire scale.]*

		Not at all True			Some-what True			Very True	NA	RF	DK
8.1	**I came for treatment because… [If I go to treatment, it will be because…]** *[REPEAT THE STEM FOR EACH QUESTION]*										
a.	**~~I won't feel good about myself if I don't get some help.~~**	01	02	03	04	05	06	07	97	98	99
b.	**I was referred by the legal system.**	01	02	03	04	05	06	07	97	98	99
c.	**~~I feel so guilty about my problem that I have to do something about it.~~**	01	02	03	04	05	06	07	97	98	99
8.2	**If I remain in treatment it will probably be because… [If I go to treatment it will be because…]** *[REPEAT THE STEM FOR EACH QUESTION]*										
a.	**I'll get in trouble if I don't.**	01	02	03	04	05	06	07	97	98	99
b.	**~~I'll feel very bad about myself if I don't.~~**	01	02	03	04	05	06	07	97	98	99
c.	**~~I'll feel like a failure if I don't.~~**	01	02	03	04	05	06	07	97	98	99
	[If NO to ALL 5.4, 5.5 AND 6.1, SKIP TO SECTION 9. If YES to ANY 5.4, 5.5 OR 6.1 GO TO 8.3]										
8.3	**Rate each of the following in terms of how true each statement is for you.**										
a.	**~~I came to treatment now because I was under pressure to come.~~**	01	02	03	04	05	06	07	97	98	99
b.	**~~I am not sure treatment will work for me.~~**	01	02	03	04	05	06	07	97	98	99
c.	**I decided to come to treatment because I was interested in getting help.**	01	02	03	04	05	06	07	97	98	99
d.	**~~I am not very confident that I will get results from treatment this time.~~**	01	02	03	04	05	06	07	97	98	99

Perceived Coercion to Adhere to Treatment

[Interviewer: Refer to questions 5.4, 5.5 and 6.1. If the Respondent had NO mental health treatment (5.4) AND NO substance abuse treatment (5.5) AND NO MH/SA medications (6.1) since Six Months Prior to Entry Date (i.e., answered "No" to ALL 5.4, 5.5 and 6.1), SKIP TO 7.9. If the Respondent answered "Yes" to ANY or ALL 5.4, 5.5, and/or 6.1 continue with 7.1]

Now let's get back to you and your experiences of treatment. Think back over your experience of going to mental health, alcohol or drug treatment or medication management in the past six months. Again, I am talking about the time period from __ __/__ __/__ __ __ __ *[insert Six Months Prior to Entry Date]* to __ __/__ __/__ __ __ __ *[insert Entry Date]*. Think about all of the things people might have done to keep you going to the mental health or alcohol or drug treatment center OR taking medications as prescribed. Then tell me how you feel about the following statements.

[Show RESPONSE CARD #6]

Do you STRONGLY AGREE, AGREE, FEEL NEUTRAL OR MIXED, DISAGREE, or STRONGLY DISAGREE to the following statements:

		Strongly Agree	Agree	Neutral or Mixed	Disagree	Strongly Disagree	NA	RF	DK
7.1	I felt free to do what I wanted about going to treatment.	1	2	3	4	5	7	8	9
7.2	I chose to go to treatment.	1	2	3	4	5	7	8	9
7.3	It was my idea to go to treatment.	1	2	3	4	5	7	8	9
7.4	I had a lot of control over whether I went to treatment.	1	2	3	4	5	7	8	9
7.5	I had more influence than anyone else on whether I went to treatment.	1	2	3	4	5	7	8	9
7.6	I had enough of a chance to say whether I wanted to go to treatment.	1	2	3	4	5	7	8	9
7.7	I got to say what I wanted about going to treatment.	1	2	3	4	5	7	8	9
7.8	My opinion about going to treatment didn't matter.	1	2	3	4	5	7	8	9

7.9 **Are you NOW required to attend treatment or take medication for mental health, alcohol, or drug problems by a probation officer, judge, or anyone else in the legal system?**

0 No
1 Yes
8 RF
9 DK