

Use of the Criminal Justice System to Leverage Mental Health Treatment: Effects on Treatment Adherence and Satisfaction

Allison D. Redlich, PhD, Henry J. Steadman, PhD, Pamela Clark Robbins, BA, and Jeffrey W. Swanson, PhD

In efforts to divert persons with mental illness from jails and prisons, the option of community mental health treatment in lieu of incarceration is sometimes offered. In addition, community treatment can be mandated, or "leveraged," as a condition of probation or parole. However, little is known about the characteristics and attitudes of persons who are and who are not leveraged into community mental health treatment via the criminal justice (CJ) system. In the present study, over 1,000 outpatients with mental disorders were queried about their experiences with CJ leverages, as well as their clinical and treatment histories. Persons who had experienced at least one form of CJ leverage were more likely to be younger and male and to have more hospitalizations than persons who had never experienced a CJ leverage. However, leverage experience was not associated with treatment compliance and satisfaction, or perceptions of coercion and mandate efficacy, particularly when demographic characteristics were considered.

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In the past 20 years, the criminal justice system in the United States has been overwhelmed with persons with serious mental illness.^{1,2} As a result, various forms of jail diversion programs have proliferated in an attempt to attenuate the flow.^{3,4} Within the past decade, the number of identified U.S. diversion programs has grown from 52 to 299.⁵ The two types of programs that have particularly fueled this growth are pre-booking, police-based diversion programs, often based on the Memphis, Tennessee Crisis Intervention Team (CIT) model,⁶ and mental health courts.^{7,8} From its inception in 1988, the CIT program has spawned approximately 49 other police-

based diversion programs across the United States. In 1997, there were two mental health courts. Today, there are more than 100, with the number increasing seemingly weekly.⁹

Despite the rapid expansion of criminal justice diversion programs, little empirical information about their operations or outcomes is available. One specific area where data are particularly lacking concerns the frequency with which different forms of diversion are offered to suspects and defendants with mental health and substance use problems. Until recently, it was entirely unclear how often mandated treatment (via the criminal justice system or otherwise) encroached on the lives of people with serious mental illness. Monahan and colleagues¹⁰ found that among 1,000 persons with mental illness receiving active outpatient treatment in five U.S. cities, between 44 and 59 percent had experienced at least one form of community treatment mandate (e.g., from representative payees or housing-related situations).

Dr. Redlich is Senior Research Associate, Dr. Steadman is President, and Ms. Robbins is Vice President for Operations, Policy Research Associates, Inc., Delmar, NY. Dr. Swanson is Associate Professor, Department of Psychiatry and Behavioral Sciences, Duke University School of Medicine, Durham, NC. Funding for this study was provided by the John D. and Catherine T. MacArthur Foundation Network on Community Mandated Treatment. Address correspondence to: Allison D. Redlich, PhD, Policy Research Associates, Inc., 345 Delaware Avenue, Delmar, NY 12054. E-mail: aredlich@prainc.com

In regard to mandates emanating from the criminal justice system specifically, 39 to 49 percent of outpatients who had ever been arrested reported experiencing at least one form of criminal justice mandate.

In the present paper, we build on the prevalence data collected by Monahan *et al.*¹⁰ Our primary purpose in this research was to examine how demographic and clinical factors are associated with experiencing leverages for mental health treatment imposed by the criminal justice system. In addition, we investigated how the presence of criminal justice mandates for mental health treatment affects clients' perceptions of coercion in regard to outpatient treatment, treatment adherence, treatment satisfaction, and the effectiveness of such mandates.

Criminal Diversion for Persons with Mental Illness

Underlying all diversion programs for persons with mental illness, regardless of type, is the working, but as yet untested, assumption that if clients can obtain access to and engage in community treatment, improved criminal justice (e.g., fewer arrests) and mental health outcomes (e.g., fewer symptoms) will follow. Much of this thinking has developed from the drug treatment court model, where indeed it has been shown that mandating persons to undergo substance abuse treatment leads to less use and abuse of drugs and alcohol.¹¹ However, when dealing with people with mental health problems, debates often arise about whether it is fair and efficacious to mandate (or as is sometimes termed, "coerce") someone into treatment. Related research on patients' perceived coercion into treatment has shown mixed results. Some research has demonstrated that initial perceptions of coercion can influence later treatment adherence,^{12,13} whereas other research has not found such a relationship.^{14,15} In the present study, in the context of criminal diversion, we explore further relations between perceived coercion and treatment adherence, adding the yet-to-be-studied component of criminal justice leverage into the context.

In addition to mandating treatment, an important aspect of criminal diversion programs is the reliance on some form of community supervision. In effect, mandated treatment and community supervision go hand in hand, as supervision enforces the mandate. In pre-booking programs, criminal justice supervi-

sion is absent because criminal charges are not filed in lieu of voluntary admission to community-based mental health services. Nonetheless, there are widely variable levels of supervision, but they are often based in the mental health system in the form of case managers. By contrast, post-booking programs, whether court- or jail-based, usually have contingencies whereby in exchange for a detainee's being released to a set of agreed upon community-based mental health and substance abuse services, criminal charges or sentences are suspended, or guilty pleas are required with a set of terms and conditions that will be supervised by a probation department. In all such circumstances, the original criminal court retains some authority should the diverted person fail to adhere to the treatment terms and conditions, whereupon criminal processing can be reinstated.

Probation supervision of persons with mental illness has been studied in the recent work by Skeem and colleagues.^{16,17} They have highlighted the tensions in probation practices in which persons who have serious mental illness have mandated mental health treatment included in the terms and conditions of probation. Based on five focus groups, two with probationers and three with probation officers (POs), they concluded that POs use positive pressures (inducements and persuasion), mixed pressures (reminders and staffings), and negative pressures (small penalties and threats). Farabee *et al.*¹⁸ looked at similar issues for mentally ill parolees. They concluded, "coerced patients are not necessarily unwilling patients" (Ref. 18, p 85).

Criminal diversion programs continue to proliferate, expanding continuing judicial supervision of persons with mental illness involved in the justice system. As more communities respond to the recommendations of the President's New Freedom Commission¹⁹ to "widely [adopt] adult criminal justice and juvenile justice diversion and reentry strategies to avoid the unnecessary criminalization and extended incarceration of nonviolent adult and juvenile offenders with mental illnesses" (Ref. 19, pp 43–4), the role of the criminal justice system in community-based mental health care will do nothing but expand. It is essential that we begin to document empirically the characteristics and reactions of clients who receive these services, and ultimately, how these characteristics and reactions interact with treatment to affect outcomes.

Criminal Justice Leverage

Table 1 Demographic and Mental Health Characteristics by Study Site

	Chicago (n = 205)		Durham (n = 204)		San Francisco (n = 200)		Tampa (n = 202)		Worcester (n = 200)	
	% or Mean	N or SD	% or Mean	N or SD	% or Mean	N or SD	% or Mean	N or SD	% or Mean	N or SD
Mean age	44.2	9.8	41.3	11.0	46.7	9.3	43.4	10.2	41.9	10.0
% Men	57.1	117	32.4	67	64.5	129	47.0	95	51.0	102
% White	57.6	118	34.8	71	49.0	98	55.0	111	68.5	137
% African American	26.8	55	60.3	123	28.5	57	32.7	66	7.0	14
Diagnoses										
% Schizophrenia	49.3	101	43.1	88	42.5	85	49.5	100	41.5	83
% Bipolar	16.9	35	17.6	36	16.0	32	14.4	29	17.0	34
% Major depression	30.3	62	27.5	56	30.5	61	30.7	62	29.0	58
% Self-reported substance abuse	19	40	17	35	36	72	14	28	22	44

Methods

Subjects

Approximately 200 outpatients from publicly funded programs were sampled from each of five sites: Chicago, Illinois; Durham, North Carolina; San Francisco, California; Tampa, Florida; and Worcester, Massachusetts. While we specified that participants had to be treated for “mental” disorders (rather than only for substance abuse disorders), we did not specify a diagnosis or a given level of acuity. The specific inclusion criteria for the samples were: (1) age, 18 to 65 years; (2) language, English- or Spanish-speaking; (3) service use, currently in outpatient treatment for a mental disorder with a publicly supported mental health service provider (operationally defined as at least one appointment/visit in the prior six months); and (4) duration of service use, occurrence of first service contact as an adult at least six months ago. Demographic characteristics of subjects are presented in Table 1.

Measures

Criminal Justice System Leverages

We assessed three forms of subjects’ lifetime criminal justice (CJ) system leverage experiences: (1) on arrest, having ever been offered the option of criminal charges being dropped in exchange for community treatment; (2) on conviction, having ever been offered the option of avoiding jail or prison in exchange for community treatment; and (3) having ever been mandated community treatment via probation and/or parole. An overall criminal justice leverage score was also created. Subjects who endorsed at least one of the three leverages were considered as

having had experienced “any criminal justice leverage” as compared with subjects who had experienced “no criminal justice leverage.”

Other questions related to CJ leverage included perceptions of the effectiveness of the CJ leverages in helping people to stay well and in helping people to avoid trouble with the law (1, very effective; 5, not at all effective).

Clinical Characteristics

In addition to obtaining objective diagnostic information by chart review, we used the anchored version of the Brief Psychiatric Rating Scale (BPRS)²⁰ to assess current psychiatric symptoms. In addition, Global Assessment of Functioning (GAF)²¹ scores were created to assess current functioning levels. At the completion of the interview, the trained and reliable interviewers created a GAF score. Insight into mental illness was assessed with the Insight and Treatment Attitudes Questionnaire (ITAQ).²² Self-reported alcohol and drug use for the past 30 days was obtained. If participants had drunk any alcohol or taken street or nonprescribed drugs, follow-up questions from the CAGE Questionnaire²³ were asked. The CAGE Questionnaire is made up of four questions asking if people (1) felt they needed to Cut down on their drinking, (2) were Annoyed by people complaining about their drinking, (3) felt Guilty about drinking, and (4) needed an Eye-opener in the morning. These same four questions were asked about drug use. We then combined alcohol and drug abuse and dichotomized into “one or more substance abuse symptoms” versus “no substance abuse symptoms.” Finally, participants were asked the number of outpatient visits they had had in

the past month, the number of previous hospitalizations, and their age when they had first seen a professional for mental health concerns.

To assess treatment compliance, participants were asked to rate their level of compliance in the past six months on a five-point Likert scale (1, never missed an appointment; 5, avoided keeping appointments altogether). Medication compliance was assessed in a similar manner except a six-point scale was used (1, never missed taking medication; 6, never took medication). To measure treatment satisfaction, a series of 14 questions adapted from Mental Health Statistics Improvement Program (MHSIP) Consumer Survey²⁴ were asked. Questions included "I felt free to complain" and "As a direct result of services I received, I am better able to control my life." A mean composite score (Cronbach $\alpha = .89$) was created to have one global measure of treatment satisfaction (higher scores indicate less satisfaction). And, finally, perceived coercion was measured according to the MacArthur Perceived Coercion Scale.²⁵ Questions, which were adapted to reflect perceptions about outpatient treatment, included "I felt free to do what I wanted about going to the mental health center" and "I had a lot of control over whether I went to the mental health center." As in other studies,²⁶ a dichotomous perceived coercion score was created by labeling those with a score below the median as "low perceived coercion" and those with a score above the median as "high perceived coercion."

Procedure

At the Worcester, Tampa, and San Francisco sites, potential subjects were recruited sequentially in the waiting rooms of outpatient clinics of community mental health centers by study researchers. In Durham, a list of potentially eligible subjects was created from management information system data, and these patients were randomly selected to be approached regarding the study. Both recruitment strategies were used at the Chicago site. Refusal rates varied from 2 to 13 percent across sites.

The project was reviewed and approved by the Institutional Review Board of Policy Research Associates, Inc. After a complete description of the study to the subjects, written informed consent was obtained. A one-time, structured interview, lasting about 90 minutes, was administered in person by a trained interviewer. Participants were paid \$25 for the interview.

Results

Monahan *et al.*¹⁰ found the following six characteristics to predict positively at least one lifetime CJ leverage experience: (1) being younger (below the median age of 44 years), (2) being male, (3) being African American, (4) having substance abuse problems, (5) having had more than three inpatient hospitalizations, and (6) having been in outpatient treatment for more than 20 years. Here, we were interested in whether the same characteristics predicted each of the three CJ leverages separately. That is, for example, are the characteristics of persons who may be made the offer of having their charges dropped the same as the characteristics of persons who may be subjected to mandated community treatment as a probation or parole condition? To compare directly our results with those reported in Monahan *et al.*,¹⁰ we conducted similar logistic regression analyses for each of the three CJ leverages. For purposes of these analyses, participants were divided into those who did not experience any of the three CJ leverages and those who experienced the specific leverage in question. For example, for the regression concerning the arrest/drop-charges leverage, participants who had experienced this specific type of leverage were compared with those who had not experienced any criminal justice leverage. Participants who had not experienced the arrest/drop-charges leverage specifically, but had experienced one or both of the other two types of criminal justice leverage were excluded from the specific regression on arrest/drop-charges. Similar exclusions were made in the regression analyses of postconviction and probation/parole leverage.

Zelen's tests of the homogeneity of odds ratios were first performed to determine whether associational data from the five sites could be pooled (i.e., represented a sampling distribution from a common population), with respect to the three CJ leverage regressions.²⁷ If the Zelen's test showed that the sites' odds ratios (ORs) for a given variable were homogeneous, we then entered that variable into a stratified multiple logistic regression analysis, which calculated a common adjusted odds ratio across sites, with a confidence interval and probability corrected for the clustered nature of the data.²⁸

For the analysis of leverage connected to arrest and offering to drop charges, we found that the 10 variables previously used in the overall CJ leverage re-

Criminal Justice Leverage

Table 2 Predictors of CJ Leverages

	Arrest: Drop Charges (<i>n</i> = 867)		Conviction: Avoid Jail/Prison (<i>n</i> = 847)		Probation/Parole Mandate (<i>n</i> = 845)	
	OR	95% CI	OR	95% CI	OR	95% CI
Age above median (>44 years)	0.57**	(0.38–0.85)	0.54**	(0.35–0.84)	0.50**	(0.32–0.78)
Male	1.60**	(1.07–2.38)	1.78**	(1.15–2.75)	2.89***	(1.82–4.57)
African American	1.75	(0.87–3.50)	1.67	(0.89–3.39)	1.70	(0.84–3.46)
White	1.66	(0.88–3.15)	1.11	(0.57–2.13)	1.34	(0.69–2.58)
Substance abuse	2.17***	(1.41–3.33)	2.13**	(1.35–3.38)	†	
BPRS score above median (>30)	1.26	(0.84–1.89)	1.26	(0.82–1.93)	1.82**	(1.15–2.87)
GAF score above median (>47)	0.85	(0.55–1.32)	†		0.76	(0.47–1.23)
Insight score above median (>18)	1.07	0.71–1.60	1.00	(0.65–1.54)	1.40	(0.89–2.19)
Past hospitalizations above median (>3)	1.96**	(1.29–2.98)	2.82***	(1.75–4.55)	1.72*	(1.10–2.72)
Time in treatment above median (>20 years)	1.76**	(1.14–2.71)	1.77*	(1.12–2.81)	1.58	0.99–2.52
Model significance	Likelihood ratio = 56.7; <i>df</i> = 10***		Likelihood ratio = 62.71; <i>df</i> = 9***		Likelihood ratio = 61.39; <i>df</i> = 9***	

p* < .05, ** *p* < .01, * *p* < .001

†Excluded from the pooled model because sites' odds ratios differed significantly, according to Zelen's test of homogeneity.

gression could be utilized (i.e., the six listed above that were significant predictors of overall CJ leverage, plus the following four additional variables: being white, BPRS score, GAF score, and insight into mental illness).¹⁰ However, for the conviction/avoid-jail/prison and probation/parole leverages respectively, GAF and substance abuse scores could not be pooled across sites in the analyses, because the sites' odds ratios differed significantly, according to the Zelen's tests.

Results from the regressions revealed that many (but not all) of the same variables that were associated with receipt of any of the CJ leverages were also associated with receipt of each of the three CJ leverages separately (Table 2). More specifically, in multivariate analysis of the three individual types of CJ leverage, the following variables remained significant (or near significant): younger age, being male, having had more than three inpatient hospitalizations, and having been in outpatient treatment for more than 20 years. Note that for probation/parole mandates, the effect of time in treatment approached statistical significance (OR = 1.58, *p* < .10), but the association was not as strong as with the other two types of CJ leverage.

In addition, having substance abuse problems remained a significant predictor of arrest/drop-charges, and conviction/avoid jail/prison leverages. As mentioned earlier, substance abuse scores were not entered into the probation/parole regression because the homogeneity test revealed that the odds ratios varied significantly by site and thus could not

be pooled. Moreover, whereas African-American participants were more likely to have experienced any one of the CJ leverages, in the separate leverage regressions, being African American did not significantly predict receipt of the three CJ leverages separately, most likely because of reduced power to detect significant findings.

The four variables that were not associated with the aggregate CJ leverage variable¹⁰ also were not significantly associated with the individual types of CJ leverage, with one exception. Specifically, participants with higher levels of current symptomatology (i.e., BPRS scores above the median of 30) were nearly two times more likely (OR = 1.82) to report having mandated community treatment as a condition of probation/parole. BPRS scores were not related to the other two types of CJ leverage.

CJ Leverage and Outpatient Treatment

It also was of interest to determine whether patients who had experienced leverages from the criminal justice system differed from those who had never experienced leverages in regard to treatment. We were specifically interested in perceived coercion of outpatient treatment, appointment and medication compliance, treatment satisfaction, and the perceived efficacy of the leverages in helping people to stay well and avoid trouble with the law.

First, chi-square analyses were conducted for each site separately by yes/no overall CJ leverage and dichotomous perceived coercion scores. In general, there was a nonsignificant tendency (all *p* ≥ .06) for

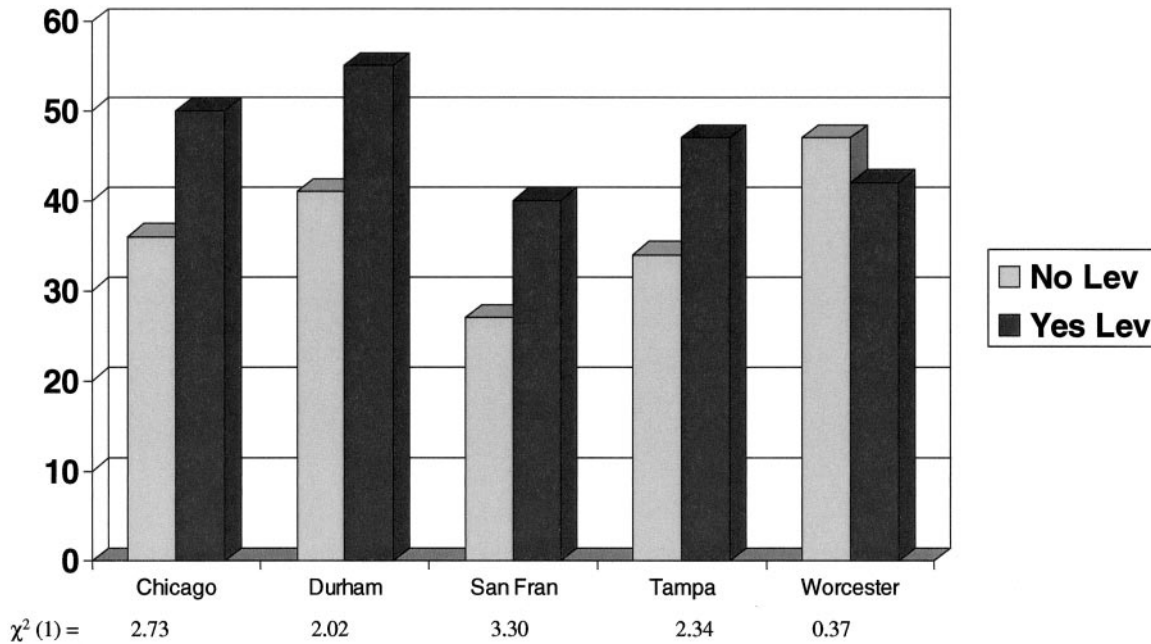


Figure 1. Percentages of participants with "high coercion" as a function of criminal justice leverage experience, by site.

patients who had experienced one or more CJ leverages to have higher perceived coercion scores (Fig. 1). We next conducted separate one-way analyses of variance (ANOVAs) with CJ leverage as the fixed factor (0, never experienced CJ leverage; 1, experienced one or more CJ leverages) and the variables mentioned earlier as dependent measures. As shown in Table 3, when leverage was examined alone, patients who reported having experienced at least one CJ leverage were significantly less compliant with their mental health and substance treatment appointments and taking their prescribed medications and were less likely to be satisfied with their current treatment regimens. The differences in perceptions of leverage efficacy between those who had and had

not experienced CJ leverages were not significant, indicating that CJ leverages were viewed as equally effective in helping people to stay well and avoid trouble with the law, regardless of experience.

When two-way ANOVAs were conducted with data collection site as a factor in addition to CJ leverage, in general, the same results did not emerge. The main effect findings concerning appointment and medication compliance were no longer significant, although the effect of treatment satisfaction remained. That is, in comparison to persons who had never experienced a CJ leverage, those who had experienced criminal justice leverage were significantly less likely to be satisfied with their treatment. There were no significant interactions between site and CJ

Table 3 Mean Comparisons by CJ Leverage

	Mean: No CJ Leverage Experiences	Mean: one or More CJ Leverage Experience	Main Effect: CJ Leverage Alone F (df)	Main Effect: CJ Leverage, When Site Included F (df)	Main Effect: CJ Leverage, When Site Included With Age and Gender Covaried F (df)
Appointment compliance	1.68	1.79	(1,979) = 3.67*	(1,971) = 1.71	(1,968) = 1.59
Medication compliance	1.73	1.90	(1,964) = 4.97*	(1,956) = 3.40	(1,953) = 2.55
Treatment satisfaction	2.03	2.13	(1,996) = 5.35*	(1,988) = 4.17*	(1,985) = 3.60
CJ leverage efficacy: help people stay well	2.55	2.50	(1,987) = 0.42	(1,979) = 0.86	(1,977) = 1.22
CJ leverage efficacy: help people avoid trouble with law	2.40	2.32	(1,991) = 1.27	(1,983) = 0.98	(1,980) = 0.41

Appointment compliance: 1, extremely compliant; 5, not at all compliant. Medication compliance: 1, extremely compliant; 6, not at all compliant. Treatment satisfaction: 1, extremely satisfied; 5, not at all satisfied. Leverage efficacies: 1, very effective; 5, not all effective. *p < .05.

leverage. When the same two-way ANOVAs were repeated, with adjustment for participant age and gender, the main effect of CJ leverage on treatment satisfaction ratings only approached significance ($p = .06$). Thus, although there first appeared to be meaningful differences between those who had and who had not experienced CJ leverages, further examination revealed that these differences tended to be due to between-site differences and other factors, such as age and gender (i.e., younger males), regardless of criminal justice leverage experiences.

Finally, we examined diagnoses in regard to criminal justice leverage experiences. Chi-square analyses revealed that having a diagnosis of a schizospectrum disorder, bipolar disorder, or major depression did not influence whether a patient had experienced leverages via the criminal justice system (all $\chi^2 \leq .42$; $p \geq .52$).

In summary, experience of one of the three forms of criminal justice leverage that we examined was generally predicted by the same variables. A notable exception was that higher BPRS (i.e., more symptomatology) predicted receipt of probation/parole-mandated treatment, but not the other two forms of leverage. Further, our analyses revealed that after adjustment for gender, age, and data collection site, treatment satisfaction, treatment compliance, and perceived leverage efficacy were not associated with whether persons with mental illness had experienced criminal justice leverages.

Discussion

In all of the circumstances in which the criminal court retains jurisdiction through open cases or the possibility of a technical violation of probation, there is an underlying theory that is often not made explicit and for which there is an absence of empirical support. The implicit model is (1) criminal justice mandates increase treatment adherence; and (2), with improved adherence to treatment, the desired clinical and social policy outcomes can be achieved (i.e., lower subsequent arrests, less violence, less frequent use of expensive mental health services, and increased public safety).

Much of the thinking in the mental health-criminal justice arena about mandated community treatment in lieu of incarceration is based on the literature from the substance abuse field.⁷ What has been documented there is that for mandated substance abuse treatment, clients who partially complete treatment

improve more than people who receive no treatment and that treatment completers had significantly improved outcomes compared with those left untreated or partially treated.¹¹ Simply put, mandated substance abuse treatment produces improved clinical and social policy outcomes.²⁹

In the arena of mental health treatment studied herein, we found no significant association between experiencing criminal justice leverage and reported treatment compliance or treatment satisfaction, controlling for study site, age, and gender. Our data, however, are limited by the lack of temporal sequencing of the key variables (i.e., we cannot distinguish cases in which decreased compliance and satisfaction preceded the criminal justice mandate from cases in which the causal order may have been the reverse). The lack of association suggests that longitudinal studies are needed to determine whether the conceptual models and research on mandated substance abuse treatment may be generalized to mandated mental health treatment.³⁰ For example, a potentially profitable next step would be to examine longitudinally whether and how leverage experiences affect treatment effectiveness and reduction in mental health and substance abuse symptoms.

We caution that this five-site study cannot be considered representative of the U.S. population, and thus the results may or may not be generalized to other regions or to the nation as a whole. The five sites were not chosen at random and they used variations on a common approach to sample selection. In their demographic and clinical characteristics, the samples differ significantly from each other on several variables associated with the use of leverage. The samples also differ from broader, nationally representative, survey samples of individuals receiving specialty mental health services in the community. For example, compared with respondents from the NIMH National Comorbidity Study³¹ who were in active treatment for mental disorders, our samples included significantly higher proportions of males, individuals with psychotic disorders, and high-frequency outpatient service users—variables that may be associated with receiving leveraged mental health treatment.

Our data, which expand on the work done by Monahan and his colleagues,¹⁰ reinforce the need for more extensive and sophisticated forays into these critical issues as new forms of mandated mental health treatment by the criminal justice system are

being rapidly expanded in mechanisms such as mental health courts and other post-booking diversion programs. They also point to the potential lack of direct applicability of the research on leverages in substance abuse treatment to circumstances of mental health treatment associated with criminal justice involvement.

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