

Leverage, the Treatment Relationship, and Treatment Participation

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Objective: Although many psychiatric patients experience various forms of pressure or leverage to participate in community treatment, the association between such experiences and treatment participation is controversial. This study evaluated the hypothesis that aspects of the treatment relationship, such as the working alliance, psychological reactance, and perceived coercion, could be important in understanding treatment adherence and satisfaction in a group of patients at risk of experiencing leverage. **Methods:** A total of 198 outpatients at two community mental health centers completed structured interviews including measures of the treatment relationship, treatment participation, experience of leverage, and clinical functioning. Regression analyses were used to assess associations between the treatment relationship and treatment adherence and satisfaction while concomitantly considering experiences of leverage, demographic characteristics, and clinical functioning. **Results:** Approximately four in ten participants reported experiencing some form of leverage to adhere to treatment during the previous six months, such as pressures related to the criminal justice system, money, housing, and outpatient commitment. Patients who perceived greater coercion to participate in treatment were more likely to report taking their medications as prescribed. Higher satisfaction with treatment was associated with lower perceived coercion, a better working alliance, and lower levels of psychological reactance. **Conclusions:** Benefits in medication adherence associated with interventions that patients perceive as coercive may come at a cost of decreased satisfaction with treatment. Aspects of the treatment relationship hold promise for individualizing treatment planning in a way that addresses satisfaction as well as adherence. (*Psychiatric Services* 64:431–436, 2013; doi: 10.1176/appi.ps.201200368)

Although most patients with severe mental disorders receive treatment in community settings, many do not adhere to treatment and, as a result, experience repeated arrests, emergency room visits, and involuntary hospitalizations (1–5). Such individuals often are subject to various pressures to

leverage their participation in treatment (6–8).

For example, patients may experience pressure related to the criminal justice system, such as a requirement to participate in community treatment as a condition of sentencing to probation rather than to jail. Patients may experience pressure related to money,

such as perceiving that disbursement of their disability checks by representative payees is contingent upon adherence to treatment. They may experience pressure related to housing, such as perceiving a threat of eviction from subsidized housing if they are not actively engaged in treatment. Some patients are subject to pressure in the form of outpatient civil commitment, such that avoidance of hospitalization is linked to participation in community treatment. In addition, patients may experience informal forms of leverage to participate in treatment, such as pressures from family members, health care providers, and others.

Previous efforts to document an association between leverage and treatment participation, defined here as including adherence and satisfaction, have yielded mixed results (9–11). For example, Redlich and colleagues (10) found no association between lifetime experiences of criminal justice leverage and treatment adherence or satisfaction. Elbogen and colleagues (11) reported that outpatient civil commitment and representative payeeship generally were associated with treatment adherence, but patients who were not adherent were more likely to perceive these leverages as coercive. Research has suggested that among individuals who are subject to attempts to leverage their participation in treatment, aspects of the treatment relationship may be important to treatment participation (12–14).

The literature suggests three aspects of the treatment relationship that may affect treatment participation among groups of patients at risk of experiencing leverage. First, the

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quality of the working alliance—the extent to which the patient and therapist work together with shared responsibility for treatment goals—has been shown to have a consistent relationship with outcomes of therapeutic interventions across theoretical orientations and patient populations (15–17).

Second, patients' level of psychological reactance has been shown to affect treatment outcomes. Originally described by Brehm (18), reactance is a motivational force to restore or reassert one's ability to engage in freedoms perceived as lost or threatened. Highly reactant individuals are described as "oppositional" and likely to "react against external influence." Highly reactant patients tend to have better outcomes with nondirective therapies, and patients who are low in reactance tend to have better outcomes with directive therapies, such as cognitive-behavioral therapy (19,20).

Third, perceived coercion—patients' subjective perceptions about how much influence and control they have over decisions about their treatment—may affect patients' treatment participation (21,22).

This project concerned data from the San Francisco site of a larger study that was directed toward understanding the frequency with which patients in community treatment experience leverage and the demographic and clinical correlates of receiving leverage. At the San Francisco site, additional measures of the treatment relationship were collected. This study assessed the extent to which aspects of the treatment relationship could account for satisfaction and adherence among a group of patients who were at risk of experiencing leverage. We hypothesized that a better working alliance, lower psychological reactance, and lower perceived coercion would be associated with higher treatment satisfaction and treatment adherence. We expected that associations between the treatment relationship and treatment participation would hold up when concurrently taking into account the demographic and clinical characteristics of the patients and whether they experienced leverage to adhere to treatment.

Methods

Participants

Data came from the San Francisco site of a multisite study of the prevalence of leverage in community treatment, the details of which have been described previously (23). Eligibility criteria included age between 18 and 65 years, current outpatient treatment of a mental disorder in a publicly funded clinic, and first service contact as an adult no less than six months earlier. Participants were recruited by members of the research team from the waiting rooms of two community mental health clinics. Seven percent of those eligible to participate declined. After receiving a complete description of the study, participants gave written informed consent.

A trained member of the research team administered a structured interview lasting about 90 minutes. Participants were paid \$25 for the interview. Diagnostic information was obtained from chart review. The protocol was approved by the Committee on Human Research of the University of California, San Francisco. Data were collected between May and October of 2003.

The study group included 198 outpatients. The mean \pm SD age was 46.7 ± 9.3 years; 65% (N=128) were male, 49% (N=98) were white, 28% (N=56) were African American, and 22% (N=44) were of other racial-ethnic backgrounds. Primary diagnoses included psychotic disorder (N=83, 42%), major depression (N=61, 31%), bipolar disorder (N=32, 16%) and other diagnoses (N=21, 11%). Chart diagnoses were made by the treating clinicians on the basis of *DSM-IV* criteria. A detailed description of the demographic and clinical characteristics of the study group and relationships between these variables and lifetime experience of leverage is available elsewhere (23).

Measures

Relationship measures. The working alliance was measured with the Working Alliance Inventory–Client Version (WAI) (24). The WAI is among the most widely used and best validated measures of the alliance and has been correlated with outcomes of both

general psychotherapy and case management for people with severe mental disorders (15). The client version of the WAI is a set of 36 questions designed to measure the patient's view of the quality of the alliance between the patient and therapist. It is pan-theoretical and includes questions assessing patient and therapist agreement on the goals of treatment, patient and therapist agreement on how to achieve the goals, and the affective quality of the relationship or bond between patient and therapist. Each item is rated on a scale ranging from 1 to 7.

Therapeutic reactance was measured with the Therapeutic Reactance Scale (25), a 28-item self-report measure rating one's tendency toward oppositional behavior on a 4-point scale ranging from "strongly agree" to "strongly disagree." Examples include "I resent authority figures who try to tell me what to do," "If I am told what to do, I often do the opposite," and "I am very stubborn and set in my ways."

Perceived coercion was measured with the five-item MacArthur Perceived Coercion Scale (26), with the item content adapted to assess perceptions of outpatient treatment. Items include "People tried to force me to go to the mental health center," and "I had a lot of control over whether I went to the mental health center."

Treatment participation. Medication adherence was assessed by asking participants to rate the extent to which they adhered to prescribed medication treatment over the past month on a 6-point scale ranging from 6, never missed taking medications, to 1, never took medications. Participants rated their attendance to scheduled appointments over the past month on a 5-point scale ranging from 5, never missed an appointment, to 1, never kept an appointment.

Participants reported their satisfaction with treatment by rating five items from the Mental Health Statistics Improvement Program Consumer Survey–Treatment Satisfaction Module (27). The items concerned perceptions that treatment was beneficial and were rated on a scale ranging from 1, strongly agree, to 5, strongly disagree. (The scaling was reversed

for purposes of data analysis, so that higher scores mean higher satisfaction.) Sample items include “As a direct result of services I received, I deal more effectively with daily problems” and “As a direct result of services I received, my symptoms are not bothering me as much.”

Clinical characteristics. Severity of current psychiatric symptoms was rated by interviewers using the anchored version of the Brief Psychiatric Rating Scale (BPRS) (28). Interviewers rated the participants’ overall level of psychological functioning with the Global Assessment of Functioning (29).

Interviewers asked about alcohol or drug use during the past 30 days. If participants reported alcohol or drug use, they were asked the questions from the CAGE Questionnaire (30,31) (whether they had ever felt that they should cut down on their drinking, been annoyed by others criticizing their drinking, felt guilty about drinking, and had a drink first thing in the morning to steady their nerves). The same four questions were asked about drug use. For purposes of data analysis, alcohol and drug use were combined to create a variable representing one or more substance abuse symptoms versus no substance abuse symptoms.

The ten-item version of the Drug Attitude Inventory (DAI) (32) was used to assess the attitudes of participants toward taking psychiatric medication. The DAI measures the subjective experience of medications, including benefits and side effects. [To prevent redundancy with the MacArthur Perceived Coercion Scale, the DAI item “I take medications of my own free choice” was removed before data analysis.]

Leverage. Interviewers asked about the experience during the past six months of four types of leverage to participate in outpatient treatment: use of representative payeeship (typically a family member or professional assigned to manage the money of a recipient of disability payments); housing supports contingent upon adhering to treatment; criminal sanctions requiring treatment, for example, as terms of probation; and involuntary outpatient commitment, including practically equivalent judicial orders.

Because the focus of this study was adherence and satisfaction with recently received treatment, our analyses studied leverages that the participants had experienced recently. Other studies of the relationship between mandated treatment and treatment participation have tended to focus on patients’ lifetime experience of leverage (8–10,23).

Data analysis

Multivariable regression models were developed to examine the association of each measure of treatment participation and the relationship measures while concomitantly considering experiences of any leverage and the demographic and clinical variables. Models of ordered categorical variables (attendance at appointments and medication adherence) used ordered logistic regression. The model of treatment satisfaction, a continuous variable, used multiple regression. Data analysis used SAS, version 9.1.3.

Results

Thirty-seven percent (N=73) of the study group reported having experienced some form of leverage to participate in treatment within the last six months, including leverage from the criminal justice system (N=44, 22%) or leverage related to housing (N=34, 17%) outpatient commitment (N=5, 3%), or money (N=3, 2%).

Table 1 shows the results of the multivariable regression models. Better adherence to prescribed medication was associated with higher perceived coercion. Better medication adherence also was associated with a more positive experience of medication effects (DAI), lower levels of current symptoms (BPRS), and absence of co-occurring symptoms of substance abuse. The experience of leverage was not associated with medication adherence.

Better attendance at appointments was associated with lower levels of current symptoms (BPRS). Neither the treatment relationship variables nor the experience of leverage significantly added to the model of attendance at appointments. Controlling for clinical and demographic characteristics as well as the experience of leverage, the model indicated that higher treatment satisfaction was associated

with a better working alliance, lower psychological reactance, and less perceived coercion.

Discussion

As the context of treatment for most people with severe mental disorders has shifted from hospital to community-based services, facilitating treatment participation is key to encouraging recovery. Many patients experience leverage to participate in treatment; about four of every ten patients in this sample experienced some form of leverage within the preceding six months.

The results suggested the value of considering the treatment relationship in understanding treatment participation among groups of patients who are at risk of experiencing leverage. Multivariate regression models that concurrently considered the influence of demographic and clinical variables showed that patients who perceived greater coercion to participate in treatment were more likely to report taking their medications as prescribed. On the other hand, higher satisfaction with treatment was associated with less perceived coercion, a better working alliance, and lower levels of psychological reactance. Taken together, these findings raise concern that benefits in medication adherence that can result from interventions that patients perceived as coercive may come at the cost of decreased satisfaction with treatment.

The cross-sectional design of this study precluded causal inferences. We could not determine from this study the temporal ordering of the relationship variables, treatment adherence, and treatment satisfaction. The results, however, suggested the promise of future research to determine the extent to which aspects of the treatment relationship could influence treatment participation in groups of patients for whom the experience of leverage is common. Other research has suggested that the quality of the working alliance, the level of psychological reactance, and the extent of perceived coercion can predict outcomes such as satisfaction and adherence (15,20,21). Taking these issues into account has the potential to facilitate individualized treatment

Table 1Summary of regression models of treatment participation by 198 patients at two community mental health centers^a

Variable	Adherence to medication ^b			Adherence to appointments ^c			Treatment satisfaction ^d		
	B	SE	Wald χ^2	B	SE	Wald χ^2	B	SE	t
Relationship									
Working Alliance Inventory score	.002	.005	.24	-.002	.005	.25	.004	.001	2.92**
Therapeutic Reactance Scale score	.001	.025	.00	.005	.026	.03	-.020	.007	-2.80**
Perceived Coercion Scale score	.880	.279	9.93**	.380	.273	1.94	-.157	.072	-2.17*
Any leverage	.173	.340	.26	-.253	.376	.45	.133	.960	1.38
Control									
Drug Attitude Inventory score	3.357	.824	16.61**	1.015	.838	1.47	.395	.238	1.66
Brief Psychiatric Rating Scale total score	-.055	.025	4.70*	-.070	.027	6.67**	-.007	.007	-.94
Global Assessment of Functioning score	.037	.029	1.70	-.001	.030	.00	.009	.008	1.08
Substance abuse symptoms	-.955	.333	8.23**	-.602	.348	2.99	-.005	.098	-.05
Psychotic disorder	.025	.330	.01	.028	.351	.01	.248	.093	2.66**
Number of hospitalizations	-.018	.080	.05	-.006	.089	.00	.008	.022	.36
Age	.010	.018	.31	.028	.019	2.26	-.000	.005	-.05
Male	-.104	.346	.09	-.036	.359	.01	.114	.098	1.16
Nonwhite	.249	.332	.56	-.518	.344	2.27	.049	.093	.53

^a Multivariable regression models examined the association of each measure of treatment participation and the relationship measures while concomitantly considering experiences of any leverage and control variables. Models of adherence to medication and appointments used ordered logistic regression, and the model of treatment satisfaction used multiple regression analysis; $df=1$ for all tests shown

^b $-2 \log$ likelihood without covariates=438.35; $-2 \log$ likelihood with covariates=377.04; Wald $\chi^2=52.57$, $df=13$, $p<.001$

^c $-2 \log$ likelihood without covariates=331.47; $-2 \log$ likelihood with covariates=297.31; Wald $\chi^2=28.60$, $df=13$, $p<.01$

^d Adjusted $R^2=.248$, $F=5.58$, $df=13$ and 168 , $p<.001$

* $p<.05$, ** $p<.01$

planning that enhances consumer satisfaction as well as adherence.

An influential Institute of Medicine report advocated a model of health care for the 21st century that is based on "patient-centered care," which is respectful of and responsive to the individual preferences, needs, and values of patients (33). Similarly, the President's New Freedom Commission on Mental Health advocated for a service system that is consumer and family driven (34). Because impairments in decision-making capacity and potential dangerousness can result in mandated treatment of some individuals with mental disorders, a challenge for the field is to determine how to give patients a voice in the options available, even within the context of mandated treatment.

A follow-up Institute of Medicine report advocated implementation of patient-centered models of care for individuals with mental health and substance use conditions and proposed that actively supporting these patients' decision making at the point of care delivery can improve patient outcomes, such as satisfaction (35,36). Similarly, the National Consensus Statement on Mental Health Recovery

stressed the importance of individualized and person-centered care, which values consumer choices, and suggested that supportive, trust-based relationships can be important to the process of recovery (37).

How might facilitating shared patient-clinician decision making improve treatment participation among groups of patients who commonly experience leverage to adhere to community treatment? Encouraging patients' active collaboration in the treatment process may enhance the therapeutic alliance, reduce perceived coercion, and diminish the adverse consequences of psychological reactance. Perceived coercion may be reduced by actions that convey that the clinician is acting out of concern for patients, is treating them with respect and honesty, is encouraging them to describe their side of the story, and is considering what they have to say in making decisions about treatment (38-40).

Similarly, the working alliance may be enhanced by conveying an optimistic perspective about treatment and its effectiveness and by informing patients about their illness, the treatment options, and the potential risks

and benefits of alternative treatments (41-44). Psychological reactance can be mitigated by sharing responsibility for outcomes between patients and clinicians, by continuously inviting patient participation and cooperation, by giving choices, and by maintaining an attitude of dignity and respect toward patients (44-46).

A limitation of this study was its reliance on self-report. For example, we evaluated patients' self-reported experience of various leverages, such as criminal justice leverages and outpatient commitment, but did not determine whether these experiences corresponded to official records of objectively administered leverages. Nevertheless, patients' self-reports are important, given that individuals vary in their responses to specific pressures in treatment settings (11,13,47). Moreover, our findings that measures of the treatment relationship, for example, perceived coercion and the working alliance, were associated with treatment satisfaction whereas the experience of leverage was not were consistent with previous research with persons in inpatient care. Katsakou and others (48) found that among individuals who were admitted involuntarily for inpatient

care, perceptions of coercion had a much stronger impact on satisfaction with treatment than the documented use of coercive interventions.

The observational design of our study precluded causal inferences about whether leverage was effective in facilitating treatment adherence. The similarity in level of adherence between patients who did and did not experience leverage could represent the success of leverage in facilitating adherence. Also, because we studied individuals who were sufficiently adherent to be present at the clinic on the day of the research interview, our analyses were focused on variability in levels of adherence and satisfaction among patients who were at least somewhat adherent to treatment.

The multivariate analyses showed that the associations between the relationship variables and treatment participation held up when concurrently considering demographic, clinical, and treatment history variables, such as current symptoms, level of impairment, history of hospitalizations, presence or absence of psychosis, and perceived effectiveness of medication treatment. In addition, the associations between the control variables and treatment adherence tended to be consistent with findings of previous research, for example, medication adherence was positively associated with more positive experiences of medication effects (49,50) and was negatively associated with co-occurring substance abuse (51). Nevertheless, it is worth noting that other, unmeasured aspects of participants' treatment experiences and clinical conditions could also have been important to their experiences of leverage, treatment adherence, and treatment satisfaction (52,53).

Conclusions

Attention to the treatment relationship can enhance understanding of satisfaction and adherence by groups of patients for whom the experience of leverage is common. Although treatment relationships may be affected adversely when patients are subject to leverage to participate in treatment, the results of this study suggest the promise of future research on the role of the treatment relationships

in the context of mandated community treatment, given that this may be a modifiable component of care that is relevant to treatment satisfaction and adherence. Such research could facilitate implementation of patient-centered care among groups of patients for whom the experience of leverage is common.

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