Treatment motivation in drug users: A theory-based analysis
Douglas Longshore *, Cheryl Teruya

Abstract
Motivation for drug use treatment is widely regarded as crucial to a client’s engagement in treatment and success in quitting drug use. Motivation is typically measured with items reflecting high treatment readiness (e.g., perceived need for treatment and commitment to participate) and low treatment resistance (e.g., skepticism regarding benefits of treatment). Building upon reactance theory and the psychotherapeutic construct of resistance, we conceptualized these two aspects of treatment motivation—readiness and resistance—as distinct constructs and examined their predictive power in a sample of 1295 drug-using offenders referred to treatment while on probation. The sample was 60.7% African Americans, 33.5% non-Hispanic Whites, and 21.2% women; their ages ranged from 16 to 63 years old. Interviews occurred at treatment entry and 6 months later. Readiness (but not resistance) predicted treatment retention during the 6-month period. Resistance (but not readiness) predicted drug use, especially among offenders for whom the treatment referral was coercive. These findings suggest that readiness and resistance should both be assessed among clients entering treatment, especially when the referral is coercive. Intake and counseling protocols should address readiness and resistance separately.

Keywords: Motivation; Treatment; Drug use

1. Introduction
Motivation for drug use treatment has long been viewed by clinicians as a “critical determining factor” affecting the likelihood that clients will sustain their participation in treatment and eliminate or reduce their drug use (Gregoire and Burke, 2004, p. 35; De Leon et al., 2000). However, motivation at treatment intake has proven to be an inconsistent predictor of treatment retention and outcomes. Further conceptual and methodological work is needed to improve our understanding of treatment motivation as a theoretical construct and to raise the value of motivation measures as tools for clinical assessment and research. This study, based on insights from the social psychological literature on reactance theory and the psychotherapeutic literature on resistance, examined the possibility that treatment motivation is better understood as two related but distinct constructs: readiness for treatment and resistance to treatment.

* Corresponding author. Tel.: +1 310 445 0874x231, fax: +1 310 473 7885.
E-mail address: dlongsho@ucla.edu (D. Longshore).

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dimension predicted longer retention in residential as well as methadone treatment in Joe et al. (1998). Finally, while logically distinct, the three dimensions are highly inter-correlated (Joe et al., 1998; Knight et al., 1994). A motivation measure combining all three dimensions was positively but weakly related to post-treatment drug use and crime in Simpson et al. (2000). DeLeon et al. (1994) distinguished motivation to quit drug use and readiness for treatment. Both consistently predict short- and long-term retention in treatment (e.g., DeLeon et al., 1994, 1997), although their predictive power is generally modest.

Research on the transtheoretical model of behavior change (Prochaska and Norcross, 1994) has conceptualized motivation in “stage of change” terms. Blanchard et al. (2003, p. 57) described the stages of change as a “heuristic for understanding motivation and more specifically readiness to change” (see also Maisto et al., 1999). Motivation emerges first in the person’s recognition of problems caused by drug use (the contemplation stage) and increases as he/she considers the possibility of change (the preparation stage) and then acts on a decision to change (the action stage) by, for example, entering treatment and/or attempting to quit drug use. Simpson and Joe (1993) have noted the correspondence between dimensions of treatment motivation and the transtheoretical stages of change (see also Joe et al., 1998). People scoring high on problem recognition but low on both desire for help and treatment readiness are presumably at the contemplation stage of change; they acknowledge drug-related problems but have no plan to change and have not yet made any actual effort to do so. High scores on problem recognition and desire for help along with a low score on treatment readiness typify the preparation stage, whereas high scores on all three dimensions may characterize a person ready to take action in the form of entering treatment. Transtheoretical studies have used self-report items to classify individuals into discrete stages of change and to create a continuous measure of overall motivation.

The University of Rhode Island Change Assessment (URICA) provides a score on each stage of change and an overall motivation measure. For comparability to other motivation studies, we will focus on research using the overall measure, calculated by subtracting the precontemplation score from the sum of scores on contemplation, preparation, and action. Motivation measured in this way failed to predict treatment attendance or drug/alcohol use at the end of treatment in Blanchard et al. (2003); was not significantly associated with treatment retention in Stotts et al. (2003) and, contrary to expectation, predicted shorter retention in Pantalon and Swanson (2003). Carpenter et al. (2002) also found an inverse relationship between motivation and treatment retention and inconsistent relationships between motivation and drug use. Finally, Project MATCH found a unitary motivation measure (called "readiness" in that project) to be a strong but inconsistent predictor of drinking outcomes (Carbonari and DiClemente, 2000).

The recovery attitude and treatment evaluator (RAA TE) scale is used to assess client status on five dimensions (Najavits et al., 1997; Smith et al., 1995). Two of these dimensions are: resistance to treatment, reflecting the client’s degree of problem recognition and commitment to treatment; and resistance to continuing care, reflecting the degree to which a client acknowledges that recovery is an ongoing process. Other dimensions capture the severity of co-occurring medical problems, severity of co-occurring psychiatric problems, and degree of family support for recovery. In limited research to date, the five dimensions have been tested separately and combined into an overall RAA TE score (Britt et al., 1995; Najavits et al., 1997). Higher RAA TE scores were associated with a lower likelihood of treatment completion (Britt et al., 1995; Gastfriend et al., 1995).

Treatment resistance has consistently been viewed as an indicator of low treatment motivation, regardless of how the dimensions of motivation or stages of change are conceptualized and measured. That is, resistance has been accorded no theoretical or clinical relevance, apart from indicating the client’s level of motivation. For example, affirmative responses to the URICA’s precontemplation items (e.g., “As far as I am concerned, I don’t have any problems that need changing”) suggest a client in denial regarding his/her drug-related problems and disinclined to participate in treatment. But in the unitary motivation measure above, the precontemplation score is merely subtracted from scores on the other three scales. High precontemplation is thus taken to indicate low motivation. In studies using the RA TE, the inference derived from high scores on the two dimensions explicitly called resistance is that the client is unmotivated (e.g., Carey et al., 1999; Gastfriend et al., 1995). Finally, the motivation measures developed by Simpson and Joe (1993) and DeLeon et al. (1994) are based on agree–disagree items worded in both directions. An “agree” response to positively worded items (e.g., “you would go to treatment only if someone else made you”) is taken to indicate low motivation. The bi-directional wording reflects no theoretical distinction. Its purpose is methodological—to avoid or reduce response set. Thus, negatively worded items in these measures are handled exactly as precontemplation and resistance items are handled in stage measures and the RAA TE.

1.2. Resistance

In psychotherapy research and practice, treatment resistance has been recognized as a clinically significant construct. Originally the term referred to a client’s unconscious opposition to psychoanalysis, and this opposition was attributed to intrapsychic processes such as unwillingness to deal with suppressed trauma. More recently, resistance has been reframed more broadly as ambivalence regarding psychotherapy or refusal to participate in a genuine way and has been attributed to interpersonal processes involving both
client and counselor (Cowan and Presbury, 2000; Cullari, 1996).

A related construct, reactance, has been studied in domains including not only engagement in psychotherapy but also resolution of developmental stages (e.g., attainment of intimacy) and adherence to medication regimens (Fogarty and Youngs, 2000; Siebel and Dowd, 2001). In reactance theory (Brehm, 1966, 1993), perceived threats to one’s current or future freedom of action are said to induce a motivational state, reactance, the aim of which is to restore the threatened freedom. A reactant person may aggress directly against the threatening agent, may become oppositional in more indirect ways, or may seek to restore freedom by engaging in a related behavior still available to him/her. In the context of drug use treatment, clients may show reactance by insisting that their drug use is under control and is nobody else’s business, refusing to participate genuinely in counseling sessions, undermining the group counseling process, or continuing to use drugs.

A distinction should be drawn between resistance as an expression of ambivalence regarding particular topics or behavior changes and reactance as an expression of resentment regarding perceived constraint on one’s freedom to act. That is, resistance may have more to do with the content of treatment, while reactance may have more to do with the process by which that content is introduced. Cowan and Presbury (2000, p. 412) view reactance, in comparison with resistance, as “a more benign way of looking at the client’s reluctance to change in a situation in which he or she may feel helpless.” On the other hand, Beutler et al. (2002a) have proposed that reactance may be an extreme form of resistance. We use the term reactance to refer to both constructs and define it as opposition to treatment, whether that opposition reflects a skeptical view of the benefits of treatment or resentment of a perceived loss of control over decisions regarding treatment participation or drug use (see Arnow et al., 2003). This broad view of reactance is supported by a limited empirical literature in which resistance and reactance, both measured using clinical observation or self-report, have shown the same inverse association with treatment process and outcomes, e.g., premature termination of psychotherapy (see review by Beutler et al., 2002b). The key aspect of resistance is, in short, opposition—not mere indifference. Moreover, the construal of resistance as a motivational state in both psychotherapy and reactance theory suggests that it can arise in response to situational circumstances or events. Thus, reactance might be high because the treatment referral is coercive or the counselor’s therapeutic approach is off-putting—even among clients whose treatment readiness is also high, i.e., clients who know they have a drug problem and want help for it. On the other hand, resistance might be low even when readiness is low.

Shearer and Ogan’s (2002) pilot-tested a measure of treatment resistance in a sample of drug-using criminal offenders. Like other self-report measures of resistance and reactance (e.g., Dowd et al., 1991), the Correctional Treatment Resistance Scale was based on items reflecting problem denial, low or passive compliance with treatment, distrust of counseling, reluctance to self-disclose, and skepticism regarding the value of treatment. Resistance scores were significantly higher among offenders who reported having been forced into treatment than among those who reported having entered voluntarily. Treatment retention and outcomes were not examined, but the finding does suggest that perceived coercion in treatment referral might trigger resistance.

On the other hand, in a study of retention in alcohol treatment, Ryan et al. (1995) found an interaction between motivation and external pressure to enter treatment (not specifically pressure from criminal justice). Retention time was longer among drinkers for whom treatment motivation and external pressure were both high. Marin (1995) found the same interaction in predicting treatment retention in a sample of methadone patients. Both studies suggest that coercion might potentiate, rather than undermine, the favorable influence of treatment motivation. However, neither study differentiated readiness and resistance in treatment motivation or examined the possibility that coercion might potentiate the unfavorable influence of resistance.

Building upon reactance theory and the psychotherapeutic construct of resistance, this study examined the possibility that treatment motivation is better understood as two related but distinct constructs—readiness and resistance. In a sample of drug users referred to treatment by criminal justice, we first determined whether a measure of each construct independently predicted treatment retention and drug use. We next divided the sample into those who reported being coerced into treatment and those who (despite having been referred by criminal justice) did not perceive the referral as coercive. This enabled us to examine treatment retention and drug use as joint effects of coercion and readiness and as joint effects of coercion and reactance.

2. Method
2.1. Sample

This study was based on a secondary analysis of data collected in an evaluation of five treatment alternatives to street crimes (TASC) programs between 1991 and 1995. Findings of the evaluation were reported in Anglin et al. (1999), Longshore et al. (1998), and Turner and Longshore (1998). TASC programs provide case management services for drug-using offenders referred by the criminal justice and serve as a bridge between community treatment programs and criminal justice agencies. At the time of the evaluation, there were more than 125 TASC programs operating in 25 states. Four of the evaluated programs served adult offenders; the fifth program served juveniles.

A total of 2014 offenders agreed to participate in the evaluation and completed the intake interview. Very few (under 1%) refused to participate, typically on the advice of defense
The resistance measure was additive index of mean scores on four items reflecting one’s interest in and commitment to drug use treatment. Items were: “treatment could be your last chance to solve your drug problems,” “if you enter treatment, you will stay for a while,” “treatment could really help you,” and “you want to be in a treatment program.” These items were slight revisions of positively worded motivation items developed by Simpson and colleagues (Knight et al., 1994). Response options were strongly disagree, disagree, neutral, agree, and strongly agree. Scores ranged from 1 to 5 (mean = 3.22, S.D. = 1.01, α = 0.86). Higher values indicated higher resistance.

2.2.3. Coercion

The offender subsample was asked, “Why did you enter treatment at this time?” Open-ended responses were coded into categories representing health problems, family pressure, legal pressure, child custody concerns, employment concerns, fear of becoming drug dependent, and other reasons. The interviewer accepted up to three reasons. If legal pressure was the only reason given by an offender, coercion was scored yes. Coercion was scored no if any other reason was given for treatment entry and if legal pressure was given as one but not the only reason. About one-quarter of the subsample (24.7%) had a score of yes on coercion. We considered an alternative measure of coercion scored yes if the offender cited legal coercion as one but not the only reason for treatment entry. However, variability on this measure was quite low (92% scored yes), as might be expected among offenders referred to treatment by criminal justice.

Table 1
Background characteristics of sample (N = 1295)

<table>
<thead>
<tr>
<th></th>
<th>Male (%)</th>
<th>Female (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marital status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married</td>
<td>24.5</td>
<td>75.5</td>
</tr>
<tr>
<td>Unmarried</td>
<td>28.4 (9.4)</td>
<td></td>
</tr>
<tr>
<td>Race/ethnicity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>African-American</td>
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<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td>4.6</td>
<td></td>
</tr>
<tr>
<td>Non-Hispanic white</td>
<td>33.5</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>1.0</td>
<td></td>
</tr>
<tr>
<td>Formal education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Did not finish high school (%)</td>
<td>66.4</td>
<td></td>
</tr>
<tr>
<td>Finished high school or GED (%)</td>
<td>33.6</td>
<td></td>
</tr>
<tr>
<td>Drug use history (ever used)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marijuana (%)</td>
<td>96.0</td>
<td></td>
</tr>
<tr>
<td>Cocaine (%)</td>
<td>68.4</td>
<td></td>
</tr>
<tr>
<td>Heroin (%)</td>
<td>31.3</td>
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2.2.4. Treatment retention

Offenders were asked how many days, if any, they had spent in drug treatment or detoxification during the past 6 months (mean = 35.4, S.D. = 59.9).

2.2.5. Drug use

Offenders were asked how often they had used an illegal drug during the 30 days before the follow-up interview. Questions separately covered: marijuana/hashish, crack cocaine, powder cocaine by itself, heroin by itself, heroin and cocaine together, nonprescription opioids, methadone, and amphetamine. We totaled the number of days on which each drug was used. Because questions covered each drug separately, the total number of drug use days could exceed 30, and it did exceed 30 for a small subset of offenders (4%). We therefore truncated the number of drug use days at 30 (mean = 5.3, S.D. = 9.3). Because more than one drug may have been used on a given day, this measure is only an approximate count of days on which the offender used drugs, but it does provide a serviceable indicator of degree of drug involvement over the past 30 days.

2.2.6. Incarceration days

Offenders were under criminal justice supervision and liable to incarceration if involvement in new crime or violation of the conditions of probation was detected. Thus it was important to adjust for number of days incarcerated during the follow-up period. Offenders were asked how many days, if any, they had spent in jail or prison during the past 30 days. This was the same timeframe covered in the drug use measure and therefore effectively adjusted for days not at risk for drug use (because use was possible in jail or prison, the adjustment was not necessarily complete). Number of incarceration days served also as a partial adjustment for opportunity to attend treatment, even though the recall period for treatment retention was the past 6 months. As indicated below, the incarceration measure was inversely related to both retention and drug use and was therefore useful as a covariate despite its limitations. About 24% of the sample reported having been incarcerated during the past 30 days. Number of incarceration days ranged from 0 to 30 (mean = 4.9, S.D. = 10.3 for the overall sample, mean = 20.4, S.D. = 11.3 for the subsample reporting any incarceration).

2.2.7. Other covariates

Three demographic characteristics were included as covariates in the analytic models. Based on self-report, these included sex (with men as the reference category), race/ethnicity (with non-Hispanic whites as the reference category), and years of age (scored as a continuous variable ranging from 16 to 63). To adjust for exposure to case management during the 6-month period, we added a covariate for TASC versus control/comparison group (the reference category).

2.3. Analysis

We used ordinary least squares regression analysis to examine the relevance of readiness and resistance for two outcomes – treatment days and drug use – in the full analytic sample (N=1,295). Predictors in an initial model included the readiness measure, incarceration days, sex, age, TASC case management, and indicator variables for race/ethnicity (African-American, Hispanic, and other). We then added the resistance measure to each model to determine whether it accounted for additional variance not explained by readiness.

To examine the possibility that motivation measures might interact with coercion in predicting treatment days or drug use, we turned to the subsample (N=351) for whom the coercion measure was available. We first tested a model featuring coercion and a motivation measure that combined readiness and resistance items into a single additive index (α=0.88). The latter items were reverse-scored for this analysis, so that higher scores indicate higher motivation. The purpose of this initial step was to establish whether the interaction detected by Ryan et al. (1995) and Marin (1995) could be replicated in our subsample with a motivation measure comparable to theirs. The model included coercion, the motivation measure, all covariates, and a multiplicative term crossing motivation with coercion. In subsequent analyses, we replaced the motivation measure with the readiness or resistance measure. For all interaction models, the motivation measures were centered (Aiken et al., 1991).

3. Findings

3.1. Main effects of motivation measures

Our initial model (not shown) included the readiness measure along with covariates including demographic characteristics, incarceration days, and TASC case management as predictors of treatment retention during the 6-month follow-up period. Readiness was strongly related to treatment retention (β=0.21, p<0.0001) in that model. When resistance was added to the set of predictors (see Model 1 in Table 2), there was no substantial change in the coefficient for readiness (β=0.22, p<0.0001), and the coefficient for resistance was essentially zero (β=0.01, p=0.67). The importance of adjusting for incarceration days was apparent in the significant inverse relationship between that measure and treatment retention (β=−0.14, p<0.0001). Age was positively related (β=0.15, p<0.0001), and African-American race negatively related (β=−0.07, p=0.005), to treatment retention. TASC case management was positively related (β=0.18, p<0.0001) to treatment retention. In summary, offenders scoring higher on the readiness measure remained in treatment for a greater number of days, and the resistance measure appeared to be irrelevant.

In the initial model (not shown) for drug use in the past 30 days, the readiness measure had no significant predic-
tive value ($\beta = 0.01, p = 0.74$). When added to the set of predictors (see Model 2 in Table 2), resistance was positively related to drug use ($\beta = 0.09, p < 0.002$), whereas the coefficient for readiness did not change ($\beta = 0.02, p = 0.50$). The gain in explained variance was statistically significant ($F = 9.39, p = 0.002$). Number of incarceration days was again important ($\beta = 0.20, p < 0.0001$). Age was positively related ($\beta = 0.07, p = 0.01$), and TASC case management negatively related ($\beta = -0.13, p < 0.0001$), to drug use. Thus, in a reversal of the finding for treatment retention, offenders higher on resistance reported more drug involvement, and scores on the readiness measure had no predictive value.

3.2. Interaction of coercion with motivation

We now turn to analyses testing the possibility that motivation might interact with coercion in predicting treatment retention or drug use. These analyses tested a series of three models for each outcome. The first model featured motivation as typically measured in studies of this construct (readiness and resistance items combined). The second replaced motivation with readiness; the third replaced motivation with either readiness or resistance. Coefficients were not significant for main effects or interactions. See Models 2 and 3 in Table 3.

Findings were quite different in the analyses of drug use in the past 30 days. Coercion was positively related ($\beta = 0.15, p = 0.01$) to drug use. The motivation measure had no main effect ($\beta = 0.15, p = 0.20$). The interaction between coercion and motivation was negative and significant ($\beta = -0.22, p = 0.05$). See Model 1 in Table 4. When the motivation measure was replaced by readiness, the interaction term was no longer significant ($\beta = -0.11, p = 0.36$). See Model 2 in Table 4. Finally, with motivation replaced by resistance, the interaction re-emerged clearly and strongly ($\beta = -0.30, p = 0.007$). The sign of its coefficient was positive, not negative as it was for motivation, because the resistance items were no longer reverse-scored. The change in explained variance was statistically significant when the interaction term was added in a forward-selection stepwise regression ($F = 7.33, p = 0.007$). See Model 3 in Table 4. Thus, offenders who were
coerced into treatment and who scored high on resistance had significantly more drug involvement.

In analyses not shown, we re-ran subsample models in which readiness, resistance, and two cross-product terms for their interaction with coercion were all included as predictors. We also re-ran full-sample and subsample models after excluding cases at the juvenile study site (N=350 in the full analytic sample and N=42 in the subsample). Finally, to ensure that findings were not affected by distributional properties of the outcome variables, we re-ran all analyses using a generalized linear model (SAS PROC GENMOD) and specified first a gamma distribution and then a normal distribution with a log link for each outcome. Findings did not change (data not shown).

4. Discussion

Motivation for drug use treatment is widely viewed as a critical determining factor affecting treatment participation and cessation of drug use. In research and clinical practice, motivation has been measured through multi-item indices intended to capture variability in a unitary construct. This study, based on insights from the social psychological literature on reactance theory and the psychotherapeutic construct of resistance, explored the possibility that treatment motivation is better understood as two related but distinct constructs: readiness and resistance. We examined the predictive power of these two constructs, each assessed at intake, among drug-using offenders referred to treatment while on probation. In a multivariate model controlling for client background traits, incarceration days, and TASC case management, readiness was a significant predictor of treatment retention during the 6-month period after intake. When added to this model, resistance explained no additional variance. In a similar multivariate model of drug use, resistance was significant and readiness was not. There was, in addition, evidence of interaction between resistance regarding drug use and coercion in the treatment referral. The predictive power of resistance was strongest among offenders for whom the treatment referral was coercive.

These findings suggest that readiness and resistance are two distinguishable constructs with different theoretical and clinical implications. In accord with other motivation studies, we found that readiness – what might be called the positive side of motivation – was a significant predictor of retention in treatment. But the full import of motivation would have been missed if we had focused entirely on the readiness measure or, in keeping with common practice, had employed a measure in which readiness and resistance items were treated as opposite indicators of the same construct. Drug use was predicted by the resistance measure – the negative side of motivation – and not by the readiness measure.

The nonrelationship between resistance and retention suggests that clients opposed to treatment may nevertheless “go through the motions” if compliance enables them to avoid consequences such as probation or parole revocation or loss of a job. Joe et al. (1999) found that legal coercion was positively related to treatment attendance but negatively related to therapeutic involvement (however, see also Gregoire and Burke, 2004). Blanchard et al. (2003) found that motivation failed to predict measures of substance use taken at the end of treatment. They noted that some clients may be “willing to attend treatment but . . . not ready to make actual changes in their behavior” (p. 63). Our findings are consistent with that observation but also suggest that “not ready” may be an incomplete construal and possibly even misleading. Drug use persisted not among clients whose readiness was low but among those whose resistance was high.

DeLeon (1988) and Wild et al. (1998) have argued that legal coercion and other forms of external pressure might combine with motivation to induce behavior change in treatment clients. This argument seemed to find empirical validation in studies by Ryan et al. (1995) and Marin (1995), where external pressure and treatment motivation interacted in predicting longer retention in alcohol and drug treatment. However, readiness and resistance were not tested separately in those studies, and the interaction may have been fundamentally misconstrued. That is, high scores on the motivation measure may have reflected either high readiness or low resistance, and the interaction may have been significant because retention was longest among clients scoring high on both external pressure and readiness or because retention was shortest among clients scoring high on both external pressure and resistance. Like those studies, ours found a significant interaction between motivation and external pressure in the form of criminal justice coercion. But when we split the motivation measure into readiness and resistance, the source of this interaction was clearly the latter. The interaction in our study pertained to drug use, not retention, but it does raise the possibility that the true nature of the interaction observed in all of these studies is oppositional – manifest as poor attendance or continued substance use – among clients already resistant when pressed by outside sources to enter treatment. Discrepant findings may instead be due to methodological differences (e.g., in sampling and measurement) or to the substantive difference between pressure exerted by any source and pressure specifically in the form of criminal justice coercion. In any case, our study brings important theoretical and clinical issues to the surface. For example, does the interaction between motivation and external pressure occur on the positive side of motivation (readiness) or on the negative side (resistance); does the occurrence or strength of this interaction depend on the source of external pressure; and what are the mediating processes by which coercion leads to oppositional behaviors such as low treatment compliance and continued drug use?

Limitations of this analysis should be noted. First, resistance was measured after referral to treatment but before treatment began, and clients were not asked for separate ratings of the referral process and their treatment expectations. Thus, while it is clear that our resistance measure was not...
affected by events occurring in treatment, we cannot know whether high scores on the resistance items reflected resentment triggered by the referral, opposition to treatment, or a mix of both. This limitation, in our view, does not diminish the value of our key finding, namely, that readiness and resistance appear to be distinct conceptually and predictively.

Second, we did not have a direct measure of coercion. Instead, we assumed that clients citing a criminal justice referral as the only reason they were in treatment had experienced that referral as coercive. Perceived coercion varies widely among clients referred to treatment by criminal justice (Longshore et al., 2004; Wild et al., 1998), and clients not referred by criminal justice may feel coerced by other sources. There is clearly a need for future research in which perceived coercion is measured directly. Future research should also compare clients referred by criminal justice versus other sources to determine whether main and interaction effects of resistance occur only among drug-using offenders or also among drug users not in treatment under a criminal justice order. Meanwhile, our coercion measure was serviceable if one assumes that clients citing criminal justice as the only reason for their being in treatment were substantially more likely to have experienced the referral as coercive. Third, our measure of resistance was based on items originally conceived as indicators of low motivation. The empirical distinction between readiness and resistance may be clearer in future studies measuring resistance on the basis of indicators written and tested specifically to assess that characteristic among drug treatment clients (e.g., Shearer and Ogan, 2002). Fourth, given our exploratory purpose, we did not adjust for the fact that multiple outcome measures were tested. We are aware of the controversy over circumstances under which such adjustment is appropriate (e.g., Curren-Everett, 2000; Fesse, 2002).

However, we also note that p-values for all statistically significant relationships involving readiness and resistance were well under the conventional p = 0.05 criterion.

5. Implications

Resistance to drug use treatment needs further conceptual and methodological refinement. First, resistance may have multiple dimensions, including skepticism regarding the value of treatment, reluctance to self-disclose, resentment of constraints placed on one’s freedom to act, and denial of one’s drug problem. Second, resistance may arise in response to the content of treatment (e.g., self-disclosure) or in response to some aspect of the referral or treatment process (e.g., a disrespectful tone taken by an impromptu probation officer or a confrontational counselor). Third, resistance appears to have “state” and “trait” properties. That is, while resistance may be evident in some people only when triggered situationally, research has shown that resistance is for some people a stable characteristic (Beutler et al., 2002) related to other aspects of psychosocial functioning. For example, scores on “trait reactance” may be positively associated with antisocial behavior and borderline personality disorder (Siebel and Dowd, 2001).

Future research is needed to map the dimensions of resistance to drug use treatment, to distinguish resistance to content and resistance to process, and to disentangle state and trait resistance. Also needed is research to determine whether main and interaction effects of resistance occur chiefly with drug-using criminal offenders, among whom high levels of trait resistance may be common.

Both readiness and resistance should be assessed among clients entering treatment, especially when the treatment referral is coercive. For optimal clinical value, measures of both constructs will need to meet high psychometric standards. Such measures would also add valuable precision to the study of interaction between coercion and each construct. As noted above, prior research (Marin, 1995; Ryan et al., 1995) suggested that coercion might be transformative, boosting the favorable effects of high motivation for treatment (see also Knight et al., 2000; Young and Belenko, 2002). Our research found no evidence that the coercion interacted with the readiness side of motivation. Instead, coercion appeared to exacerbate the unfavorable effect of resistance. It is possible that both multiplicative effects occur in different clients.

With sound measures of readiness and resistance, it may be possible to identify clients in whom one or the other effect occurs and to devise protocols to facilitate the one and avoid the other.

Referral, intake, and counseling protocols should address readiness and resistance separately. A considerable body of research has shown that motivational intervention may boost readiness for, and lower resistance to, drug/alcohol treatment (Czuchry and Dansereau, 2003; Miller and Rollnick, 2002). The strategy of motivational intervention is to identify a client’s stage of change and, in one or more counseling sessions, to focus on cognitive and emotional processes associated with movement to the next stage. However, it may be important to develop motivational and other intervention protocols that deal with resistance in more intensive and nuanced ways, especially given the increasing number of clients coerced into treatment by the criminal justice system. Protocols may differ, depending on whether clients appear resistant to content or to process and on whether their resistance has state or trait properties. It may be especially difficult to address resistance to the content of treatment or trait resistance linked to personality disorder. However, it may not be difficult to avoid triggering state resistance in the referral process. Research on procedural fairness has shown that people are much more willing to comply with legal sanctions if they feel they had a voice, i.e., a genuine opportunity to present their side, and if the decision-maker, e.g., judge or police officer, was balanced and respectful (Hirst and Harrrell, 2000; Tyler, 1994). “Resistance reduction” (Shaffer and Simoneau, 2001) and “paradoxical intervention” (Horvath and Goheen, 1990; Shoham-Salomon et al., 1989) may be effective tools for dealing with resistance among clients at treatment intake and in counseling because they emphasize that treatment participation and behavior change are choices that only the client...
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