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Prediction of psychotherapy process and outcome with the Personality Assessment Inventory

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ABSTRACT

The Personality Assessment Inventory (PAI; Morey, 1991) contains scales that were designed to make predictions about how an individual might respond to treatment, thereby allowing clinicians to attune treatment plans to a client's specific needs. The present study utilized two features of the PAI as predictors of treatment process and outcome in a sample of 47 outpatient veterans: the Treatment Rejection (RXR) scale and the Treatment Process Index (TPI). Data were collected for three treatment process and outcome measures: treatment utilization (ratio of appointments attended to appointments scheduled), therapist-rated therapeutic alliance, and symptom change over time. Results indicated that RXR significantly predicted utilization over and above the TPI. The TPI significantly predicted the rate of distress symptom decline over time, but RXR did not. Lastly, neither RXR nor the TPI were significant predictors of therapist-rated alliance.

1. Introduction

Decades of research have offered support for psychotherapy's general effectiveness across presenting problems, diagnoses, and therapeutic approaches. However, the question still remains as to why some clients benefit from therapy to a greater degree than others. Many clients do not complete treatment or do not achieve its full benefit, although it is often difficult to predict and plan for this after only an intake session. Formal personality assessment at the beginning of treatment may offer insight to clinicians that allows for more informed and efficient treatment planning, particularly in the context of limited clinic resources. The Personality Assessment Inventory (PAI; Morey, 1991, 2007) is a multiscale, self-report measure that provides a comprehensive assessment of personality and psychopathology designed to inform diagnosis and plan treatment (Kurtz, 2010; Morey, 1996, 2003). However, research on the utility of the PAI for prognosis, treatment selection, and other aspects of clinical management lags behind psychodiagnostic research. Two components of the PAI are of particular relevance to treatment planning: the Treatment Rejection (RXR) scale and the Treatment Process Index (TPI).

The RXR scale assesses an individual's openness to change in the self and acceptance of help from others, thereby measuring the client's explicit motivation for treatment (Morey, 1996). Higher scores on RXR indicate a lack of interest in and motivation for engaging in traditional forms of psychosocial intervention. Conversely, lower scores on RXR indicate less treatment rejection and therefore higher levels of motivation. Given that RXR directly assesses an individual's motivation to engage in treatment, the scale has been proposed to be a useful predictor of treatment adherence. For instance, Caperton et al. (2004) found that the RXR scale modestly but significantly predicted treatment noncompliance ($r = .14$) and nonaggressive infractions ($r = .14$) among incarcerated men participating in a mandatory sex offender treatment program. Identifying clients who may be at risk for treatment noncompliance is valuable, as clinicians can use this information to target clients who may require more effort to engage.

It is important to note, however, that explicit sense of motivation does not necessarily equate with good treatment prognosis, as clients may lack insight about the work and challenges associated with psychotherapy. Likewise, measurements of explicit treatment motivation may fail to address the interpersonal dynamic between therapist and client, which appears equally important to treatment success (Miller, 1985). In contrast to the RXR scale, the TPI is proposed to act as an implicit measurement of treatment amenability (Morey, 1996). Whereas the RXR scale assesses only one factor relevant to treatment success, the client's expressed motivation, the TPI identifies an array of personality characteristics that are conceptually relevant to treatment process and outcome. These client characteristics, such as hostility, lack of psychological-mindedness, and defensiveness, have been

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theoretically and empirically identified as potential impediments to effective treatment (Bohart and Wade, 2013; Clarkin and Levy, 2004). In particular, negative personality attributes and interpersonal problems, such as disagreeableness, negativity, egocentricity, and vindictiveness, may hinder the development and maintenance of the therapeutic alliance (Connolly Gibbons et al., 2003; Constantino et al., 2002; Morey, 1996). The TPI is a cumulative index of 12 configural features, each of which is represented by one or more scale elevations on the PAI profile. Low scores on the TPI indicate a number of positive attributes that are hypothesized to assist in the treatment process, whereas high scores indicate a number of problematic characteristics that may act as obstacles to progress and achievement of a good outcome (Morey, 1996).

Previous research suggests that treatment motivation and treatment amenability, as assessed by RXR and the TPI respectively, differentially contribute to the prediction of therapeutic outcome. Hopwood et al. (2007) demonstrated that TPI scores significantly differentiated mutual and nonmutual terminators in an outpatient training clinic, whereas differences in RXR scores between the two groups were nonsignificant. A similar pattern has been observed in a variety of other specialized treatment settings (Hopwood et al., 2008a; Hopwood et al., 2008b; Percosky et al., 2013). For instance, in a court-mandated inpatient substance abuse treatment center, Hopwood et al. (2008a) found that TPI scores successfully differentiated treatment completers from noncompleters, while RXR scores did not. Hopwood et al. (2008b) similarly examined this relationship among individuals seeking treatment at a hospital-based outpatient program for chronic pain, demonstrating that when treatment program graduates and nongraduates were compared, significant differences emerged on TPI scores, such that eventual graduates presented with more treatment amenability (i.e., lower TPI scores) than nongraduates. Conversely, RXR scores did not differ between the two groups. In a small sample of court-mandated outpatients being treated for sexual offenses, Percosky et al. (2013) reported that the TPI approached significance as a predictor of treatment noncompliance ($d = .69$; $p < .10$), although neither RXR nor the TPI predicted unsuccessful discharge or revocation of probation. Taken together, these findings suggest that client personality is an important indicator of treatment completion, seemingly more so than self-reported motivation alone.

There are, however, two notable exceptions to this pattern. Charnas et al. (2010) reported that those who withdrew from treatment at a university training clinic had significantly higher RXR scores than those who continued ($d = .56$), but the difference in TPI scores was not significant. Furthermore, Magyar et al. (2012) reported that neither RXR nor the TPI significantly predicted treatment progress in a court-mandated residential substance abuse treatment, both when progress was defined subjectively by the therapist and objectively by program level completion. Magyar et al. did, however, find the TPI to be predictive of disruptive behaviors in treatment, including the necessity for confrontation or removal from group therapy, as coded by the therapist. Thus, despite promising findings that the PAI offers potentially useful indicators for treatment planning, the supportive evidence is inconsistent across the wide array of treatment settings in which it has been studied.

To date, the majority of research has focused on evaluating RXR and the TPI as predictors of treatment utilization and completion. Premature termination of treatment is an important outcome variable, as it has clinical implications for both clients and clinicians (Clarkin and Levy, 2004). Additionally, treatment utilization and completion have the advantage of being behavioral variables, offering a seemingly more objective measure of treatment process and outcome than more abstract concepts like therapeutic alliance. However, despite the apparent simplicity and suitability of premature termination as a criterion for success, it has proven to be a difficult variable to define and operationalize. There are a number of reasons why a client may choose to discontinue treatment, and the process of discriminating treatment terminators from treatment continuers often fails to acknowledge the contextual determinants in individual cases, such as environmental obstacles or therapist effects. Attempts to address these challenges have given rise to a variety of operational definitions used in the empirical literature, thus making comparison across studies difficult (Hatchett and Park, 2003).

Although predicting treatment completion can be valuable, RXR and the TPI have not received sufficient attention in empirical research as predictors of other aspects of treatment process and outcome. For example, despite increasing evidence that client personality characteristics underlie the development and maintenance of the therapeutic relationship (Castonguay et al., 2006; Constantino et al., 2002), as well as several meta-analyses suggesting a strong empirical relationship ($r = .21–.28$) between the therapeutic alliance and treatment outcome (Horvath and Bedi, 2002; Horvath et al., 2011; Martin et al., 2000), there are no published studies examining the relationship between RXR, the TPI, and the subsequent establishment of therapeutic alliance. Likewise, predicting the rate at which a client will show symptom improvement represents another critical aspect of treatment outcome, and investigations using other multiscale personality inventories [e.g., the Minnesota Multiphasic Personality Inventory–2 (MMPI-2)] have suggested that personality factors may be influential in predicting symptom change over time (Forbes et al., 2002). However, no study to date has examined either the TPI or RXR as predictors in this capacity. Thus, a broader application of RXR and the TPI in psychotherapy research is necessary to fully evaluate their utility as measures of prognosis and tools for treatment planning.

Although important across clinical diagnoses, prediction of treatment process and outcome may be particularly valuable in client populations marked by high drop-out rates and difficulty forming trusting relationships. Individuals with post-traumatic stress disorder (PTSD) have a therapy drop-out rate of approximately 40%, which has been partially attributed to avoidance or distrust for others (Keller et al., 2010; West, 2015). In particular, veterans with combat-related PTSD may distrust authority figures as those who led them into the events that traumatized them, potentially leading to negative distortions about therapists (West, 2015). However, a strong therapeutic alliance has been shown to be predictive of both homework completion and the number of sessions attended in a sample of individuals receiving prolonged exposure (PE) therapy for PTSD (Keller et al., 2010), indicating that alliance may be an important factor in treatment engagement among help-seeking veterans. Furthermore, there is evidence to suggest that personality assessment of veterans may also allow for important insight into rate of symptom improvement. For instance, Forbes et al. (2002) found specific personality factors as measured by the MMPI-2, such as social alienation, to be predictive of rate of symptom change among veterans. Thus, it is plausible that RXR and the TPI of the PAI may also contribute to prediction of symptom decline in this important population.

The present study builds upon current literature by evaluating the PAI as a predictor of treatment process and outcome among veteran clients, with specific interest in the relationships of RXR and the TPI to measures of treatment utilization, therapeutic alliance, and symptom change during the course of psychotherapy. It is hypothesized that RXR will predict lower rates of treatment utilization, whereas the TPI will predict alliance formation and symptom improvement. In other words, it is expected that motivation will bring individuals to treatment, but amenability will make treatment work.

2. Method

2.1. Participants

Veterans seeking outpatient psychotherapeutic services at a Veterans Affairs Medical Center were recruited for participation. Cases were included if the veteran completed the PAI and had a minimum of three appointments scheduled, which was selected to align with the