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Treatment adherence and competency ratings among therapists, supervisors, study-related raters and external raters in a clinical trial of a 12-step facilitation for stimulant users

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ABSTRACT

This study investigated the correspondence among four groups of raters on adherence to STAGE-12, a manualized 12-step facilitation (TSF) group and individual treatment targeting stimulant abuse. The four rater groups included the study therapists, supervisors, study-related ("TSF expert") raters, and non-project related ("external") raters. Results indicated that external raters rated most critically mean adherence - the mean of all the adherence items - and global performance. External raters also demonstrated the highest degree of reliability with the designated expert. Therapists rated their own adherence lower, on average, than did supervisors and TSF expert raters, but therapist ratings also had the poorest reliability. Findings highlight the challenges in developing practical, but effective methods of fidelity monitoring for evidence based practice in clinical settings. Recommendations based on study findings are provided.

1. Introduction

Evidence-based behavioral treatments (EBTs) for substance use disorders are increasingly in demand, as healthcare policies and systems focus on infusing such practices into clinical settings (Glasner-Edwards & Rawson, 2010). Therapist adherence (the degree to which a treatment is being delivered as intended; Gearing et al., 2011), and therapist competency (skill demonstrated by therapists to deliver an intervention; Waltz, Addis, Koerner, & Jacobson, 1993) are components of treatment fidelity, also known as treatment integrity (Borrelli, 2011). These components are necessary to determine if evidence-based interventions are accurately implemented in clinical practice. The current study examines the correspondence of treatment adherence and competence ratings among therapists, supervisors, experts, and external raters in a clinical trial of a 12-step facilitation (TSF) intervention.

1.1. The role of treatment adherence in evidence-based treatments

Accurately measuring treatment adherence is crucial for experimentally validating the treatment delivered during studies testing an intervention. As EBTs are translated into clinical practice, adherence monitoring allows for verification that the EBT has been effectively implemented (Miller, Zweben, & Johnson, 2005). As noted by Garner (2009) "one of the most significant barriers to implementation research may be the lack of objective criteria for what determines when an EBT implementation has or has not occurred in practice" (p. 394). Among the various methods of measuring treatment adherence, some studies have relied on the agency or therapist self-report of implementation (Manuel, Hagedorn, & Finney, 2011); other studies have questioned the degree to which therapists are able to measure their clinical skills when learning a new EBT (e.g., Miller & Mount, 2001). Finally, treatment adherence also has important clinical implications given findings that positively associate adherence with treatment outcomes (Henggeler, Melton, Brondino, Scherer, & Hanley, 1997).

1.2. Measures of treatment adherence

In recent years, there has been an increase in the use of rating scales as a way to quantify therapist adherence to an EBT's fundamental techniques and skills. Often used in conjunction with EBT training studies (e.g., Carroll et al., 2000), rating scales provide a framework to evaluate EBT training methods, EBT implementation, and a platform for ongoing supervision. While rating scales have become more widespread in recent years, questions remain about the

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reliability and validity of such measures (Schoenwald & Garland, 2013), as well as how these measures can be used effectively in clinical settings. In research, highly trained raters, who often have no direct contact with project therapists, evaluate adherence. Research comparing independent ratings and therapist ratings has shown that therapists rate their adherence more favorably than observers (Carroll, Nich, & Rounsaville, 1998; Chapman, McCart, Letourneau, & Sheidow, 2013; Martino, Ball, Nich, Frankforter, & Carroll, 2009).These findings suggest a favorability bias about one's own therapy skills and EBT adherence. Beidas and Kendall (2010) note that this may, in part, explain the low rates of proficient treatment adherence by therapists; however they also found that therapist proficiency increased when supervision and organizational supports were provided. Indeed, a supervisor is one step removed from the therapeutic interaction, engendering more objectivity than the therapist. While increased supervision may be one way to improve therapist adherence, this assumes that the supervisors are adhering to the treatment, and are accurately judging their supervisees. The latter assumption was examined by Martino et al. (2009) in a randomized trial testing motivational enhancement therapy (MET; Ball et al., 2007). Comparisons of therapists', supervisors', and observers' treatment integrity ratings found that supervisors rated therapists more highly than observers, suggesting a favorability bias in judging treatment adherence among supervisor raters relative to trained observers (Martino et al., 2009).

If therapists rate their own skill and adherence preferentially, and supervisors also tend to provide higher ratings to supervisees, independent raters may provide assessments of therapist adherence that are less affected by favorability bias. Additionally, "independent" raters are also often associated with the treatment study and may have a stake in how well the treatment is administered, introducing another source of potential favorability bias (Perepletchikova & Kazdin, 2005).

The current study examined therapist adherence to an EBT by four sets of raters: therapists, supervisors, project-related experts (hereafter referred to as "TSF experts"), and non-project related or "external" raters. Specifically, we examined adherence ratings from the National Institutes Drug Abuse Clinical Trials Network trial, Stimulant Abuser Groups to Engage in 12-Step (STAGE-12; Donovan et al., 2013), a group and individual 12-step facilitation (TSF) treatment targeting stimulant abusers. During the STAGE-12 clinical trial, therapists, supervisors and TSF experts rated adherence to monitor treatment fidelity to the manualized intervention. Following the STAGE-12 trial, external raters also conducted adherence ratings as part of an independent study. The current study compared these four sets of adherence ratings. While group differences between rater may be due to the different perspective each rater category holds, we hypothesized that therapists would rate treatment adherence of their own sessions most favorably (the highest ratings), that ratings from other sources would be progressively lower as they became more distant from the therapist and the clinic, and less invested in therapists' successful adherence. Thus, we expected that therapists' ratings would be greater than supervisors' ratings, which would be greater than TSF expert ratings, and these in turn would be greater than the external ratings.

2. Method

2.1. Overview of STAGE-12 and Ancillary Fidelity Studies

The STAGE-12 study was a multisite randomized controlled trial comparing the STAGE-12 TSF intervention to treatment-as-usual, in a sample of adults receiving treatment for stimulant abuse or dependence in 10 outpatient programs ($N = 471$; see Donovan et al., 2013). The STAGE-12 intervention was comprised of 8 sessions delivered over a 5–8 week period. The intervention included 5 group sessions based on the Project MATCH TSF manual (Baker, 1998; Nowinski, Baker, & Carroll, 1992) adapted to a group format (Brown, Seraganian, Tremblay, & Annis, 2002a, 2002b), and 3 individual sessions based on the first and last sessions from the Project MATCH TSF manual, with the addition of a 12-step intensive referral procedure (Timko, DeBenedetti, & Billow, 2006). All STAGE-12 TSF sessions were digitally, audio-recorded for adherence monitoring by therapists, clinic supervisors and TSF experts. Treatment-as-usual sessions were not monitored for fidelity. The STAGE-12 study was approved by the University of Washington Institutional Review Board (IRB), as well as IRBs of all academic institutions affiliated with participating sites. Participants in the STAGE-12 TSF condition, as compared to TAU, were more likely to be abstinent from stimulants during treatment but not at any subsequent assessment. TSF participants had significantly lower Addiction Severity Index (ASI; McLellan et al., 1992) Drug composite scores at 3 months also had higher rates of 12-step attendance and involvement throughout the follow-up period (see Donovan et al., 2013).

Following the STAGE-12 trial, all TSF sessions were evaluated for adherence, competence and empathy by raters not affiliated with the STAGE-12 trial (i.e., external raters) using a ratings instrument based upon an expansion of the STAGE-12 TSF adherence scales (Campbell et al., 2013). The University of California, San Francisco and Oregon Health and Science University IRBs approved the procedures for this fidelity study. Greater competence and empathy in the delivery of the intervention were associated with better drug use and employment outcomes, while adherence was associated with better employment outcomes only (Guydish et al., 2014). In summary, there were four sets of STAGE-12 TSF adherence ratings; those conducted by therapists, supervisors, and TSF experts in the STAGE-12 parent study and those conducted by external raters in the fidelity study.

2.2. Ratings participants: Therapists, supervisors, TSF expert, and external raters

Therapist eligibility included being credentialed, completing a therapist assessment, and willingness to be randomly assigned to provide either the STAGE-12 intervention or usual care (the control condition). Across all 10 sites, 106 therapists met eligibility criteria; 20 were randomly selected within site (2 per site) to provide the STAGE-12 intervention. Additional therapists ($n = 4$) were recruited as needed through the course of the trial (Donovan et al., 2013). Therapists self-identified as 58% White, 17% African American, and 17% multi-racial. In terms of education, 37% reported having a masters degree, bachelor (25%), associates (25%) and high school graduation (<1%). Mean age was 52 (SD = 7.1), most (83%) were licensed or certified in their field, and they had on average 11 years (SD = 6.7) of substance abuse counseling experience.

One supervisor at each of the 10 sites supervised the STAGE-12 intervention, and 4 supervisors were added as replacements when needed. Most supervisors self-identified as White (71%), and one supervisor identified in each category of African American, multi-racial, "other", and unreported. Twenty-eight percent of supervisors reported having a doctorate, 57% a masters degree, and one supervisor each reported high school education or missing data. Mean age was 48 (SD = 12.2), most (93%) were licensed or certified in their field, and they had an average of 14 years (SD = 6.0) of substance abuse counseling experience.

TSF expert raters were 4 therapists experienced in substance abuse treatment and trained in the TSF intervention. One had a master's degree, two were doctoral candidates, and one was a licensed clinical psychologist. External raters were recruited from local university graduate programs to conduct independent fidelity ratings of STAGE-12 sessions for the fidelity study (Campbell et al., 2013). Nine raters were employed over the course of the study; seven held master's degrees and two had doctoral degrees. Years of experience in substance abuse or mental health treatment ranged from 0 to 11 (mean = 4.7). An expert rater, not affiliated with the STAGE-12 trial, co-rated approximately 6% of