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Unintended effects of training on clinicians' interest, confidence, and commitment in using motivational interviewing

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ABSTRACT

Background: Improving clinicians' interest, confidence, and commitment in using evidence-based treatment (EBT) is often an aim of training clinicians in EBT. However, the degree to which these areas actually improve through training and what their relationship is to treatment integrity is unknown.
Method: Using data from a multi-site study (Martino et al., 2010) comparing three methods of clinician training in motivational interviewing (MI), changes in interest, confidence, and commitment over time and their relationship to MI adherence and competence were assessed using mixed-effects regression models. Individual patterns of change were examined through cluster analysis.
Results: Interest, confidence, and commitment declined over time across training conditions with two distinct patterns: 76% clinicians largely maintained strong interest in MI over time with only slight decreases in confidence and commitment (the "maintainers"), while 24% began with lower initial interest, confidence, and commitment, which subsequently declined over time (the "decliners"). Interest and commitment were not associated with MI adherence and competence; confidence was associated with increased competence in the use of advanced MI strategies. However, decliners demonstrated greater use of MI-inconsistent techniques than maintainers overall ($d = 0.28$).
Conclusions: Training in MI may have an unintended consequence of diminishing clinicians' interest, confidence, or commitment in using MI in practice. While attitudinal variables in this study show mixed relationships to MI integrity, they may have some utility in identifying less enthusiastic participants, better preparing them for training, or tailoring training approaches to meet individual training needs.
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1. Introduction

The capacity of clinicians to learn and use evidence-based treatments (EBT) might be affected by their enthusiasm or attitude toward the EBT in which they are being trained (Damschroder and Hagedorn, 2011). Enthusiasm, as demonstrated by the clinician's self-reported interest, confidence, and commitment in using EBT, could influence the extent to which they are able to deliver the treatment with integrity, namely with sufficient adherence (use of therapeutic strategies consistent with the targeted treatment and minimization of interventions that would undermine its implementation) and competence (the skill or quality of implementation; Waltz et al., 1993). Examining the effect of training on attitudinal variables is considered a key component in training evaluation research (Damschroder and Hagedorn, 2011; Fixsen et al., 2005; Simpson, 2009). In this study, we examine the effect of training on clinicians' interest, confidence, and commitment in using motivational interviewing (MI; Miller and Rollnick, 2012) to help clients change substance abuse and examine the relationship of these attitudinal variables to the clinicians' MI adherence and competence.

Rogers (2003) described a process by which individuals adopt new interventions, beginning with increased knowledge of the intervention and then using this knowledge to form a favorable or unfavorable attitude toward the intervention. As most clinician training efforts include the presentation of theoretical knowledge about the EBT (MI: Madson et al., 2009; other EBT: Rakovshik and McManus, 2010), clinicians may then be expected to form attitudes about the EBT as they learn more about it. Studies that have examined changes in clinician interest, confidence, and commitment in using EBT after training have had largely positive results, with significant increases in clinician self-reported interest (Martino et al., 2007), confidence and commitment in using MI (Martino et al., 2007; Miller and Mount, 2001; Shafer et al., 2004) and other EBT (Dimeff et al., 2009; Jacobson et al., 2012). However, Miller and Mount (2001) found decreased interest in learning MI

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after training; participants indicated they felt they had learned the skills and no longer needed further training.

While self-reported interest, confidence, and commitment may change with EBT training, they may not correspond well to observer ratings of clinicians' abilities to deliver the EBT with integrity (Miller et al., 2006). For example, clinician's self-rated proficiency in MI has shown weak or nonsignificant correlations to observer-rated measures of MI integrity (Miller and Mount, 2001; Miller et al., 2004; Shafer et al., 2004). Similarly, more detailed self-rating treatment integrity checklists completed by clinicians after an EBT session show poor correspondence to independent observer-rated fidelity measures of the same session (Carroll et al., 1998; Hartzler et al., 2007; Martino et al., 2009). Possibly, self-reported attitudinal variables such as interest, confidence, and commitment in using an EBT may change during training with little relationship to clinicians' EBT proficiency.

Alternatively, attitudinal variables may be related to clinicians' abilities to benefit from training (Ball et al., 2002; Miller et al., 2006). For example, McGovern et al. (2004) found that clinicians who endorsed a disease model of addiction as their primary orientation were more likely than clinicians who did not have this allegiance to use a 12-step facilitation approach and less likely to use MI, cognitive behavioral therapy, or behavioral couples counseling. Similarly, Baer et al. (2009) and Sholomskas et al. (2005) found that clinicians who endorsed greater disease model beliefs about treatment showed fewer gains in MI and cognitive behavioral therapy skills, respectively, although Miller et al. (2004) did not find that clinician attitudinal variables affected MI training outcomes.

This study examines changes in clinicians' interest in learning, confidence in their ability, and commitment to using MI in clinical practice, using data from a multi-site trial comparing strategies for training community substance abuse clinicians in MI (Martino et al., 2010). We hypothesized that clinician interest, confidence, and commitment in using MI would increase during training, and that gains would be maintained at follow-up. Next, we examined the associations of these variables with observer-rated clinician MI adherence and competence in client sessions, including identifying individual patterns of clinician changes in self-reported MI interest, confidence, and commitment, and the manner in which these patterns might influence their use of this treatment approach.

2. Methods

2.1. Participants

Ninety-two clinicians from 12 outpatient substance abuse programs in the State of Connecticut, USA participated in the original study (see Martino et al., 2010 for demographic details). All participants were required to be employed at least 20 h per week, treat English-speaking substance-using clients, agree to provide audiotaped client sessions that demonstrated their MI integrity at each assessment time point, and provide written informed consent as approved by the Yale University School of Medicine Human Investigation Committee. Of the 92 participants, 91 (99%) provided ratings of interest, confidence, and commitment for at least two assessment points and provided the data for the present report. Retention rates were good, with 82% participants providing data at 12-week follow-up. Sample sizes per time points were: baseline = 91; post-workshop = 91; post-supervision = 84; and 12-week follow-up = 75. Collection of audiotaped sessions varied (73–96%) depending on clinician compliance, operator error, and equipment failure, with a total of 25 missing audiotaped sessions across time points.

2.2. Procedures

2.2.1. Training conditions. Details about the original study's aims, methods, and results have been published previously (Martino et al., 2010). Treatment programs were randomly assigned to one of three training conditions: (1) self-study in which clinicians only received training materials; (2) expert in which clinicians received a 15-h workshop and three monthly supervision sessions from an expert in MI; and (3) train-the-trainer in which clinicians received the workshop and supervision training from program-based trainers prepared by the MI expert. Clinicians received the training strategy to which their program had been randomly assigned (self-study = 30; expert-led = 32; train-the-trainer = 29).

2.2.2. Audiotaped sessions. Clinicians audiotaped 40-min sessions in which they conducted MI with clients who had substance use problems. Clinicians, not research staff, selected clients based on clinical judgment of the suitability of substituting MI for their routine practice and the client's willingness to be audiotaped (signed consent obtained). Prior to the session, a research assistant gave the clinician written instructions that asked the clinician to motivate the selected client to change his or her substance use. Recorded client sessions were obtained at baseline and within 2 weeks of subsequent assessment time points.

2.2.3. Rater training. Audiotaped sessions were rated by 12 raters using the Independent Tape Rater Scale (described below). Raters received approximately 44 h of training in seminars and through practicing rating tapes with expert feedback (see Martino et al., 2010 for details).

2.2.4. Assessments. All clinicians completed assessments at baseline, post 15-h workshop, following the 12-week supervision study phase, and at a 12-week follow-up point during which study-supported training had ended.

2.3. Measures

2.3.1. Independent Tape Rater Scale (ITRS). The ITRS (see Martino et al., 2008 for item descriptions and full psychometric report) assesses community program clinicians' adherence and competence using MI, strategies inconsistent with MI (e.g., providing unsolicited advice), and strategies common to drug counseling (e.g., case management). For each strategy, a 7-point Likert-type scale is used to reflect strategy frequency or extensiveness (adherence; 1 = not at all, to 7 = extensively) and the skill with which the strategy is used (competence; 1 = very poor, to 7 = excellent). In a prior study, confirmatory factor analyses of the ITRS items (Martino et al., 2008) supported a two-factor solution for MI consistent items reflecting five fundamental MI strategies (e.g., reflective listening) and five advanced MI strategies (e.g., discussing pros, cons, and ambivalence). The fundamental and advanced MI items are averaged to yield factor scores representing fundamental adherence, fundamental competence, advanced adherence, and advanced competence scores. In addition, for this study five MI-inconsistent adherence item scores (unsolicited advice, therapeutic authority, direct confrontation, emphasizing total abstinence, asserting disease concepts of addiction) were averaged to determine the relationship of training outcomes to this area. Intraclass correlation coefficients (ICC; Shrout and Fleiss, 1979) for the fundamental and advanced MI strategy adherence and competence scores showed good to excellent inter-rater reliability (adherence ICC: fundamental = 0.88 and advanced = 0.87; competence ICC: fundamental = 0.88 and advanced = 0.68) (Cicchetti, 1994). Inter-rater reliability estimates for the MI-inconsistent adherence score was excellent (ICC = .91).

2.3.2. Clinician rulers. Clinicians rated their interest, confidence, and commitment in using MI in clinical practice (0 = not at all, to 10 = extremely). The rulers showed significant increases (pre-post) in each of these three dimensions in a prior MI training study (Martino et al., 2007).

2.3.3. Clinician survey. This baseline survey (Ball et al., 2002) evaluated a broad array of clinician characteristics (e.g., demographic, educational and professional experiences, treatment allegiance), including recovery status. Treatment allegiance was assessed by asking clinicians to rate how well different addiction treatment approaches (e.g., 12-step or disease concept; cognitive-behavioral; motivational interviewing) describe their own approach to treatment, using a 5-point Likert-type scale. Recovery status was assessed by asking clinicians if they considered themselves to be a person in recovery from drug or alcohol abuse (yes/no). The Clinician Survey has been used in several other MI trials documenting clinician characteristics (Ball et al., 2007; Carroll et al., 2006, 2009; Martino et al., 2011).

2.4. Data analysis

We used mixed-effects regression models to test the hypotheses that clinician interest, confidence, and commitment in using MI would increase over time. Separate analyses were conducted for each self-reported outcome, with time (baseline, post-workshop, post-supervision, follow-up), training condition (self-study, expert-led, train-the-trainer), and their interaction entered as fixed factors and clinician as a random factor. Time was entered as a fixed categorical variable with four assessment time points and an AR1 covariance structure, assuming that performance at two adjacent points in time (e.g., baseline to post-workshop) would be more similar than performance at more distant points in time (e.g., baseline to post-supervision). Because the sample size precluded a four-level model (time, clinician, program site, training condition) that included program site as a factor, analyses with the effects of time, program site, and their interaction were run without training condition as a factor to examine the potential effects of program site on interest, confidence, and commitment.

Next, we examined the relationship of self-reported outcomes to clinician MI performance. We conducted separate mixed-effects regression models with clinician performance in MI (fundamental and advanced adherence and competence, MI-inconsistent behavior) as the outcome and time, training condition, and their interaction as fixed factors and clinician as a random factor. We then repeated these