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The effectiveness and cost of clinical supervision for motivational interviewing: A randomized controlled trial



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ABSTRACT

The effectiveness of a competency-based supervision approach called Motivational Interviewing Assessment: Supervisory Tools for Enhancing Proficiency (MIA: STEP) was compared to supervision-as-usual (SAU) for increasing clinicians' motivational interviewing (MI) adherence and competence and client retention and primary substance abstinence in a multisite hybrid type 2 effectiveness–implementation randomized controlled trial. Participants were 66 clinicians and 450 clients within one of eleven outpatient substance abuse programs. An independent evaluation of audio recorded supervision sessions indicated that MIA: STEP and SAU were highly and comparably discriminable across sites. While clinicians in both supervision conditions improved their MI performance, clinician supervised with MIA: STEP, compared to those in SAU, showed significantly greater increases in the competency in which they used fundamental and advanced MI strategies when using MI across seven intakes through a 16-week follow-up. There were no retention or substance use differences among the clients seen by clinicians in MIA: STEP or SAU. MIA: STEP was substantially more expensive to deliver than SAU. Innovative alternatives to resource-intensive competency-based supervision approaches such as MIA: STEP are needed to promote the implementation of evidence-based practices.

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1. Introduction

Clinical supervision is one of the most widely used strategies for teaching clinicians psychotherapy and supporting clinical implementation (Beidas & Kendall, 2010; Bernard & Goodyear, 2014; Carroll, Martino, & Rounsaville, 2010; Falender et al., 2004; Herschell, Kolko, Baumann, & Davis, 2010; Martino, 2010; Rakovshik & McManus, 2010; Schoenwald, Mehta, Frazier, & Shernoff, 2013; Schoenwald, Sheidow, & Chapman, 2009; Watkins, 2011a). Through the use of distinct supervisory competencies (American Psychological Association, 2015; Bernard & Goodyear, 2014; Borders et al., 2011; Falender & Shafranske, 2012), clinical supervision has been shown to benefit clinicians by increasing their treatment knowledge, confidence, and skill (Beutler & Kendall, 1995; Holloway & Neufeldt, 1995; Wheeler & Richards, 2007). However, little empirical attention has been given to the effectiveness

of clinical supervision on improving client outcomes, considered by many to be the “acid test” by which clinical supervision should be judged (Bernard & Goodyear, 2014; Ellis & Ladany, 1997; Falender & Shafranske, 2012; Lichtenberg et al., 2007). In addition, no studies have detailed the cost of supervising clinical practice, a surprising void in the literature given the widespread use of clinical supervision for training purposes. This study presents a multi-site randomized controlled trial examining the effectiveness and cost of a competency-based clinical supervision approach for motivational interviewing (MI; Miller & Rollnick, 2013), called *Motivational Interviewing Assessment: Supervisory Tools for Enhancing Proficiency* (MIA: STEP; Martino et al., 2006), on clinician MI adherence and competence and client treatment retention and outcome.

MI is a well-recognized treatment for substance use disorders that combines person-centered principles with strategies for enhancing motivation for change (Miller & Rollnick, 2013; Miller & Rose, 2009). The proficient use of MI has been shown to increase client statements that favor change (called change talk), with the balance of more pro- and less anti-change talk statements within sessions related to behavior change (Magill et al., 2014). Overall, meta-analyses have shown that MI improves client treatment retention and substance use outcomes (Burke, Arkowitz, & Menchola, 2003; Hetttema, Steele, & Miller, 2005;

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Lundahl, Kunz, Brownell, Tollefson, & Burke, 2010; Smedslund et al., 2011). A competency-based supervision approach has been touted as a promising strategy for promoting proficient MI practice (de Roten, Zimmermann, Ortega, & Delpland, 2013; Madson, Loignon, & Lane, 2009; Schwalbe, Oh, & Zweben, 2014).

Competency-based clinical supervision is an approach that explicitly identifies the knowledge and skills that clinicians need to deliver psychotherapy appropriate to their clinical settings and clientele (Falender & Shafranske, 2007). Core elements of high quality competency-based supervision include (a) directly observing clinicians' practice in sessions or reviewing audio or video recorded ones, (b) using performance feedback to monitor practice, and (c) providing individualized coaching to further develop clinicians' knowledge and skills (American Psychological Association, 2015; Falender & Shafranske, 2012; Reisner & Milne, 2012; Watkins & Scaturro, 2013) – which parallels the elements used to supervise clinicians in psychotherapy efficacy and effectiveness trials (Baer et al., 2007; Beidas & Kendall, 2010; Carroll et al., 2010; Herschell et al., 2010). The competency-based supervision approach has been adopted for use across multiple psychotherapeutic theoretical perspectives (Farber & Kaslow, 2010) within the United States (American Psychological Association, 2015; Borders et al., 2011) and internationally (Gonsalvez & Milne, 2010). Training professionals in competency-based clinical supervision is now recognized as a critical area of workforce development (Center for Substance Abuse Treatment, 2007; Fleming, 2004; Hoge, Migdole, Farkas, Ponce, & Hunnicutt, 2011; Miller, Sorensen, Selzer, & Brigham, 2006; Roche, Todd, & O'Connor, 2007; Watkins, 2011b).

In 2001, the National Institute on Drug Abuse (NIDA) and the Substance Abuse and Mental Health Services Administration Center for Substance Abuse Treatment Addiction Technology Transfer Centers (SAMHSA/CSAT/ATTC) collaborated to develop training products that would support the dissemination and implementation of research findings from NIDA-funded treatment studies into community-based practice (Condon, Miner, Balmer, & Pintello, 2008). One product, MIA: STEP (Martino et al., 2006), was developed to support local program-based supervision of MI. MIA: STEP adapted the supervision methods used to train clinical supervisors in several MI effectiveness trials (Ball et al., 2007; Carroll et al., 2006, 2009), consistent with the competency-based clinical supervision approach. It aims to improve clinicians' adherence and competence using MI following initial workshop training, thereby contributing to better client treatment retention and outcome. Interest in MIA: STEP has been strong, and a cadre of national trainers has been prepared to provide MIA: STEP training in the United States via the SAMHSA/CSAT/ATTC network (Martino et al., 2010). To date, the effectiveness and cost of using MIA: STEP in community treatment programs has not been determined.

Multiple reviews of supervision research have been conducted (Ellis & Ladany, 1997; Ellis, Ladany, Kregel, & Schult, 1996; Freitas, 2002; Holloway & Neufeldt, 1995; Milne & James, 2000; Watkins, 2011a; Wheeler & Richards, 2007). Broadly, these reviews suggest that clinical supervision enhances clinicians' treatment knowledge, adherence, competence, self-confidence, and clinician–client relationship (e.g., therapeutic alliance, satisfaction). Further, clinical supervision has been associated with a reduction in clinicians' emotional exhaustion and intention to quit their jobs (Knudsen, Ducharme, & Roman, 2008). Active training techniques (e.g., performance feedback, coaching via behavioral rehearsal/role-play) employed in successive supervision sessions maintain and sometimes additionally improve clinicians' therapeutic skills following initial didactic or workshop training (Beidas & Kendall, 2010; Herschell et al., 2010; Milne, Sheikh, Pattison, & Wilkinson, 2011; Rakovshik & McManus, 2010). These findings apply across a range of psychotherapies, including cognitive behavioral therapy (Mannix et al., 2006; Sholomskas et al., 2005), multisystemic therapy (Schoenwald et al., 2009), problem-solving therapy (Bambling, King, Raue, Schweitzer, & Lambert, 2006), and MI (de Roten et al., 2013; Madson et al., 2009; Martino et al., 2010; Miller,

Yahne, Moyers, Martinez, & Pirritano, 2004; Schwalbe et al., 2014; Smith et al., 2012; Soderlund, Madson, Rubak, & Nilsen, 2011). A recent meta-analysis of MI training studies showed that the addition of approximately monthly post-workshop supervisory feedback and coaching sessions over a 6-month period was sufficient to sustain workshop training effects, with an overall MI skills training effect size of .75 (Schwalbe et al., 2014).

In contrast to the numerous studies examining the effectiveness of clinical supervision on clinicians' knowledge, skills, and attitudes, high quality research examining the impact of clinical supervision on client outcomes is scant. Only 18 supervision–client outcome studies were conducted from 1981 to 2006 (Watkins, 2011a), and the vast majority of these studies were marked by several methodological shortcomings. Shortcomings included 1) lack of manuals operationalizing supervision, 2) insufficient documentation of supervisor training, 3) failure to demonstrate supervision integrity, 4) poorly defined and psychometrically weak instruments to measure clinician and client outcomes, 5) very small sample sizes of supervisors and clinicians reducing power for hypothesis testing, 6) inclusion of clinicians unrepresentative of community program service providers, and 7) no comparison or control conditions, random assignment, or routine follow-up assessments (Ellis & Ladany, 1997; Ellis et al., 1996; Herschell et al., 2010; Holloway & Neufeldt, 1995; Reisner & Milne, 2014; Roth, Pilling, & Turner, 2010; Schoenwald et al., 2009; Watkins, 2011a). Moreover, none of the studies controlled for the effect of seminars or workshops that preceded supervision.

An area absent in supervision research is the cost of clinical supervision. Competency-based clinical supervision approaches require a significant expenditure of time and effort to train supervisors, observe clinician practice, gather performance feedback data, and conduct the supervision sessions. The costs associated with these expenditures are relatively unknown, though it is presumed to be one of the single most expensive investments in supporting the implementation of effective treatments (Gonsalvez & Milne, 2010). In one study, Olmstead, Abraham, Martino, and Roman (2012) estimated that the cost of training two program-based supervisors to clinically supervise eight clinicians in MI monthly over a three-month period was approximately \$9700.00 (in 2006 US dollars). The cost of providing supervision needs to be justified by the capacity of competency-based supervision to achieve significantly better clinician treatment integrity and client outcomes than standard supervisory practices used in community treatment programs. Cost and efficacy data could help influence behavioral health care policy, including decisions about the dissemination and fiscal support state and federal agencies provide for clinical supervision.

This study presents a multi-site randomized controlled trial testing the effectiveness of MIA: STEP supervision, compared to supervision-as-usual (SAU), in improving community treatment program clinicians' MI adherence and competence within client intake sessions, as well as the program retention (percent scheduled sessions attended, percent retained in treatment) and days of primary substance abstinence of clients receiving MI in the study. We hypothesized that MIA: STEP would result in significantly better MI adherence and competence, better client retention, and more days of primary substance abstinence than SAU. We also calculated the cost of providing supervision in both arms.

2. Materials and methods

2.1. Study design and overview

This study uses a hybrid type 2 effectiveness–implementation randomized controlled trial design (Curran, Bauer, Mittman, Pyne, & Stetler, 2012) in that it simultaneously tests MIA: STEP, an implementation strategy, and MI, the clinical intervention being implemented. Supervisors, clinicians, and clients within 11 outpatient community treatment programs participated in the study. Based on a power analysis to account for the multi-level and multi-site nature of the study

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