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Effects of motivational interviewing fidelity on substance use treatment engagement in primary care

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ABSTRACT

Objective: Primary care (PC) may be an opportune setting to engage patients with opioid and alcohol use disorders (OAUDs) in treatment. We examined whether motivational interviewing (MI) fidelity was associated with engagement in primary care-based OAUD treatment in an integrated behavioral health setting.
Methods: We coded 42 first session therapy recordings and examined whether therapist MI global ratings and behavior counts were associated with patient engagement, defined as the patient receiving one shot of extended-release injectable naltrexone or any combination of at least two additional behavioral therapy, sublingual buprenorphine/naloxone prescriptions, or OAUD-related medical visits within 30 days of their initial behavioral therapy visit.
Results: Autonomy/support global ratings were higher in the non-engaged group (OR = 0.28, 95%CI: 0.09–0.93; $p = 0.037$). No other MI fidelity ratings were significantly associated with engagement.
Conclusion: We did not find positive associations between MI fidelity and engagement in primary care-based OAUD treatment. More research with larger samples is needed to examine how providing autonomy/support to patients who are not ready to change may affect engagement.
Practice implications: Training providers to strategically use MI to reinforce change as opposed to the status quo is needed. This may be especially important in primary care where patients may not be specifically seeking help for their OAUDs.

1. Introduction

Opioid and alcohol use disorders (OAUDs) contribute to high rates of morbidity and mortality in the US (Degenhardt et al., 2011; Roerecke & Rehm, 2013; Ronan & Herzig, 2016; Substance Abuse and Mental Health Services Administration, undated). Evidence-based treatments are available to treat OAUDs (Department of Veteran Affairs, 2015; Jonas et al., 2014; Kaner et al., 2007; Schackman, Leff, Polsky, Moore, & Fiellin, 2012; Smedslund et al., 2011), yet few individuals receive them. Of adults with substance use disorders, 95% do not perceive a need for treatment, and among those who do perceive a need but do not obtain treatment, reasons include problems with treatment acceptability and patient motivation (Substance Abuse and Mental Health Services Administration, 2014). These barriers make it difficult to engage individuals with OAUD in treatment.

Motivational interviewing (MI) is theorized to help engage individuals contemplating behavior change. MI is a collaborative and nonjudgmental conversation style, and focuses on strengthening the patient's own motivation and commitment to change (Miller & Rollnick, 2012; Rollnick, Miller, Butler, & Aloia, 2008). The first phase is dedicated specifically to engagement (establishing a helpful relationship, understanding barriers and reasons to change), and the subsequent phases are focusing (identifying change area, and setting an agenda), evocation (eliciting the patient's motivation to change and building their self-efficacy), and planning (developing a commitment to change and formulating an action plan). MI has been shown to help those not yet contemplating behavior change as well as engage those already in treatment (DiClemente & Velasquez, 2002); however, research on the latter has largely taken place in specialty treatment settings. In one multi-site effectiveness trial, participants receiving specialty care who were assigned to MI had significantly better retention in treatment through the 28-day follow-up than those assigned to a standard intervention (Carroll et al., 2006).

Less is known; however, about how MI may influence treatment engagement in primary care settings. Primary care is an opportune setting to evaluate engagement in OAUD treatment because most individuals (82%) in the general population visit primary care at least once a year (Blackwell, Lucas, & Clarke, 2014) and the focus of the visit is on physical health. More importantly, primary care is a unique setting where patients may be seeking help for a medical issue and not specifically for their OAUD use compared to those who receive treatment in specialty

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care settings. As such, patients in primary care may be less ready to change their OAUD use, and may benefit from interventions that utilize MI to resolve their ambivalence (Rollnick et al., 2008).

Large-scale efforts have been dedicated to training primary care staff in MI (Cucciare et al., 2012; Midboe, Cucciare, Trafton, Ketroser, & Chardos, 2011), and several studies highlight MI's effectiveness in improving health and substance use behaviors in medical settings (Britt, Hudson, & Blampied, 2004; Lindhe Söderlund, Madson, Rubak, & Nilsen, 2011; Lundahl et al., 2013). A recent study of patients with substance use disorders showed that MI was associated with lower odds of subsequent addiction treatment utilization (Kim et al., 2017), but did not specifically examine the mechanism for how MI may affect engagement. Evaluating how MI is delivered, or its fidelity, is important because therapists' fidelity to MI is directly associated with client behaviors in-session (e.g., client's change talk or speech in favor of change, *I should quit drinking*). For example, high fidelity to MI is associated with change talk (Magill et al., 2014). While there is mixed evidence on the effects of change talk on client outcomes (Magill et al., 2014), several studies have shown that client change talk is positively associated with improvements in their substance use outcomes (Bertholet, Faouzi, Gmel, Gaume, & Daeppen, 2010; D'Amico et al., 2014; Moyers, Martin, Houck, Christopher, & Tonigan, 2009; Osilla et al., 2015; Walker et al., 2006). In contrast, low MI fidelity is often associated with more sustain talk or speech in favor of not changing (e.g., *I don't think I need to change*) and worse outcomes (Apodaca & Longabaugh, 2009; Magill et al., 2014). Few studies have examined how MI works in primary care (Copeland, McNamara, Kelson, & Simpson, 2015) and whether MI influences proximal outcomes such as treatment engagement, which may affect longer term outcomes such as OAUD use. This paper addresses this gap by examining behavioral health therapists' MI fidelity in a primary care setting and how this may influence subsequent engagement in OAUD treatment.

We define treatment engagement as receiving a prescription for alcohol pharmacotherapy or at least two additional OAUD-related medical, opioid pharmacotherapy, or behavioral therapy visits within 30 days of an initial visit. This measure of treatment engagement is associated with improved distal outcomes such as mortality, employment and criminal justice involvement (Dunigan et al., 2014; Garnick et al., 2014; Harris, Humphreys, Bowe, Tiet, & Finney, 2010; Paddock et al., 2017). Understanding how MI fidelity may be associated with engagement in subsequent treatment has important practical implications for training providers in how to use MI when working with individuals with OAUD.

2. Methods

2.1. Study overview

This study was conducted as part of a larger randomized clinical trial (Watkins, Ober, Lamp, Setodji et al., 2017; Ober et al., 2015), which compared the effectiveness of a Collaborative Care (CC) intervention (Ober et al., 2017; Watkins, Ober, Lamp, Lind, Diamant et al., 2017) to usual primary care (UC) for participants with OAUD. The primary goal of the CC intervention was to increase patient utilization of two evidence-based OAUD treatments: a six-session brief psychotherapy treatment based on MI and cognitive behavioral therapy approaches (Osilla, D'Amico, Lind, Ober, & Watkins, 2016) and/or medication-assisted treatment, with either sublingual buprenorphine/naloxone for opioid use disorders or extended-release injectable naltrexone for alcohol use disorders (Heinzerling, Ober, Lamp, De Vries, & Watkins, 2016).

Patients entering primary care were screened by a medical assistant for opioid or alcohol misuse. Individuals who screened positive and met additional eligibility criteria for opioid and/or alcohol abuse or dependence were randomized to CC or UC. Patients assigned to CC received care coordination by one of two paraprofessional care coordinators who met with the patient to assess motivation for treatment, schedule an initial assessment, contact patients with missed appointments, and track outcomes (e.g., urinalysis results). Patients completed baseline and six-month follow-up surveys, and their visits to primary care were tracked through administrative data during the six-month study period.

2.2. Current study

We examined how MI fidelity during the patient's first behavioral therapy session with a CC therapist was associated with engagement in subsequent OAUD treatment. All patients had access to behavioral therapy or medication-assisted treatment, and patients were free to choose whether to engage in treatment. A total of 42 first session recordings were coded using the Motivational Interviewing Integrity scale (MITI 3.1) (Moyers, Martin, Manuel, Miller, & Ernst, 2010). These were individual behavioral therapy sessions with a therapist and patient from the CC arm of the study. We then examined how therapist MI fidelity was associated with patient engagement in behavioral therapy, medication-assisted treatment, and/or OAUD-related medical care within 30-days of baseline. We limited analyses to patients in the CC arm of the study because CC therapists received additional training and supervision in MI.

2.3. Setting and participants

We collaborated with two primary care clinics from a multi-site Federally Qualified Health Center (FQHC) in Los Angeles that serves a low-income population. FQHCs are widespread with over 10,400 community health centers within the United States providing care to over 26 million people (Health Resources & Services Administration, 2017). Additionally, community health centers such as FQHCs are considered pioneers in efforts to integrate care, and thus may provide a useful model for other primary care systems (Parks, Pollack, Bartels, & Mauer, 2005; Proser & Cox, 2004; Takach, Purington, & Osius, 2010). The clinics have integrated primary care and behavioral health services on-site. Participants were 42 patients assigned to CC that initiated at least one behavioral therapy session. Participants were 69.1% male, 40.5% Hispanic, and an average age of 46.2 (SD = 9.4) years old. Thirty-three participants reported their drug of choice as alcohol only, two participants reported heroin, and seven participants reported prescription opioids, with or without a comorbid alcohol use disorder. Participants received an average of 6.1 (SD = 3.8) behavioral therapy sessions.

2.4. Measures

Participants completed baseline demographic characteristics including age, gender, ethnicity, living status (e.g., homeless), drug of choice/problem substance, consequences of drug or alcohol use (Short Inventory of Problems-Alcohol and Drugs: (Alterman, Cacciola, Ivey, Habing, & Lynch, 2009; Blanchard, Morgenstern, Morgan, Lobouvie, & Bux, 2003), range 0–15), and whether they received substance use treatment in the past year.

2.4.1. MITI

The Motivational Interviewing Treatment Integrity (MITI 3.1) (Moyers et al., 2010) is a single-pass system derived from the Motivational Interviewing Skills Code (MISC; Miller, Moyers, Ernst, & Amrhein, 2003). The MITI codes therapist speech on five global ratings on a 5-point scale. These ratings include evocation (eliciting client's reasons for change), collaboration (encouraging power sharing and interaction), autonomy/support (accepting client's own control and choice), direction (leading the session), and empathy [understanding the client's point of view; (Moyers et al., 2010)]. There are also seven behavior counts that are frequency tallies [information giving, MI adherent and non-adherent statements, closed and open questions, and simple and complex reflections; (Moyers et al., 2010)]. The MITI has