RESEARCH SUMMARY BRIEF

MOTIVATIONAL INTERVIEWING AND MOTIVATION ENHANCEMENT THERAPY FOR THE TREATMENT OF OPIOID USE DISORDERS

The Diagnostic and Statistical Manual of Mental Disorders (5th ed.; DSM–5TR) defines opioid use disorder (OUD) as "a problematic pattern of opioid use leading to clinically significant impairment or distress" (American Psychiatric Association [APA], 2022). The term "opioids" refers to a class of drugs including prescription pain medications with addiction potential, such as oxycodone and morphine, as well as pharmaceutical fentanyl, illegally made fentanyl, and the illegal drug heroin (Centers for Disease Control and Prevention [CDC], 2024). According to the 2022 National Survey on Drug Use and Health (NSDUH), 6.1 million people (2.2%) over the age of 12 in the U.S. had an OUD, such as heroin use disorder or prescription pain reliever use disorder (Substance Abuse and Mental Health Services Administration [SAMHSA], 2023). In 2021, 3.3% of people over the age of 12 in the U.S. and 3.7% in Ohio misused opioids in the past year (SAMHSA, 2021).

Motivational interviewing (MI) is a practice approach utilized across a range of conditions to promote positive behavioral change and centered around developing rapport with the client. It was developed by William Miller, PhD in the 1980s based on his experience treating alcoholism and addiction (Miller, 2023). The first *Motivational Interviewing* textbook was published in the 1990s by Miller and his colleague, Steve Rollnick, PhD (Miller & Rollnick, 1991). A manualized version of MI, motivational enhancement therapy (MET), was developed in 1993 as part of a large-scale alcohol use disorder study known as Project MATCH (Miller, 2023). MET incorporates the key components of MI into a structured, manualized treatment modality. This brief outlines findings from a review of literature focused on the effectiveness and utility of MI and MET for OUDs.

MI & MET Components

MI is a therapeutic technique that strengthens an individual's motivation for and commitment to specific goals (Miller & Rollnick, 2023). MI relies on a set of core skills, fundamental principles, and techniques designed to explore ambivalence and motivation to change in an atmosphere of acceptance and compassion (MINT, 2023; see Table 1).

As a client-led approach, MI equips providers to recognize and adapt treatment to their client's level of readiness for change. In *Motivational Interviewing (4th edition)*, the application of MI is expanded to include organizational, community, and system-level changes (Miller & Rollnick, 2023). MI is commonly used alongside other treatment methods, such as cognitive behavioral strategies.

MET is a manualized motivational intervention that was designed to enhance measurability and promote consistency in the application of MI components. The original MET model used a four-session format (Miller, 2023). MET emphasizes assessment, using information provided by the individual to inform change and treatment planning.

Table 1. Key Components of MI

Core skills	open-ended questioning, affirming, reflecting, summarizing
Fundamental principles	expressing empathy, developing discrepancies, rolling with resistance, supporting self-efficacy
Main Tasks	engaging, focusing, evoking, and planning

Literature Review Methods

In 2024, a literature review was conducted to investigate outcomes associated with using MI or MET to address opioid use disorder and misuse. The literature review included searching multiple research databases: PsycINFO, MEDLINE, SocINDEX, Psychology and Behavioral Sciences Collection, Cochrane Library, and the Motivational Interviewing Network of Trainers (MINT) database of MI-focused controlled trials (MINT, 2023). Sixteen articles met eligibility criteria for a full review. Of these, 14 articles focused on MI and two focused on MET. Five of the 16 articles examined blended interventions, which consisted of some combination of MI/MET and another intervention such that any intervention effects could not be solely attributed to MI/MET. All 16 studies used experimental[1] designs. Nine studies were conducted in the U.S., two in China, two in Germany,

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one in Australia, one in the Republic of Georgia, and one in Scotland. Table 2 outlines outcomes and types of drug use represented in the reviewed studies. Fidelity was measured in 13 of the 16 studies.

Table 2. Description of Reviewed MI/MET Studies (Total n=16)

Outcomes	Drug use (n=16) Treatment retention (n=6) Mortality/morbidity (n=6)
Drug use type(s)	Primarily opioids (n=16)
Special populations	Individuals experiencing homelessness (n=1) Partners of pregnant women (n=1) Inpatients from a surgical or gynecological ward (n=2) Syringe exchangers (n=1) Individuals recently released from detention in compulsory treatment centers (n=1) Individuals with Hepatitis C (n=1)

Findings

Studies that examined the effect of MI/MET focused on outcomes such as drug use, retention, and mortality/morbidity with sample sizes ranging from 32 to 542 participants. Most studies combined MI/MET with another form of treatment when evaluating the outcomes of the MI/MET. The five studies that investigated the effect of blended interventions explored opioid use, retention-related outcomes, and mortality/morbidity-related outcomes. Each of the five studies incorporated a unique combination of therapeutic approaches and components along with MI or MET. Due to their distinct nature, findings about blended interventions will be discussed separately from MI/MET. The thirteen studies that monitored fidelity found adequate or strong adherence to intended intervention protocols.

Drug use outcomes: In studies that assessed the impact of MI/MET, opioid use was most often measured through self-report. Few studies used urine drug tests to measure opioid use. Studies often reported the number of days of drug use (Jaffray et al., 2014; Kidorf et al., 2009), reduction and cessation of drug use along with "true" reduction, which was defined as at least a 25% decrease in prescription drug dosage (Zahradnik et al., 2009; Otto et al., 2009) and

urine drug tests (Cochran et al., 2019; Gryczynski et al. 2021). Ten studies investigated the effectiveness of MI/MET in reducing drug use outcomes among individuals with OUD. Of these, two studies found that MI/MET helped reduce drug use, four studies showed promising but mixed results, and four studies found no statistically significant differences between the intervention and control groups.

In studies that assessed the impact of blended interventions, drug use was typically measured through self-report or urine drug tests. Two studies employed both self-report and urine drug tests to provide a more comprehensive assessment of drug use outcomes (Nunes et al., 2006; Zhong et al., 2015). Research findings suggested that participants in blended interventions were more likely to have negative urine drug screenings (Otiashvili et al., 2012) and significantly higher abstinence rates at follow-up (Chen et al., 2019) than participants in control groups. Jones et al. (2011) found a significant reduction in heroin use in the blended intervention group compared to the treatment as usual (TAU) group at one-month follow-up, but that effect was not sustained beyond four weeks.

Retention outcomes: Three studies focused on treatment retention in addition to drug use outcomes (Jaffray et al., 2014; Kidorf et al., 2009; Saunders et al., 1995). Retention was often measured as length of stay in treatment and treatment completion. Two of the three studies that examined retention outcomes found statistically significant differences favoring MI/MET groups. Motivational interventions were associated with more days in treatment (Saunders et al., 1995) and higher numbers of sessions attended (Kidorf et al., 2009). Although not statistically significant, Jaffray et al. (2014) found that a higher percentage of individuals in the intervention group stayed in treatment compared to the control group.

Four studies examined the effect of blended interventions on treatment retention outcomes, but only one (Nunes et al., 2006) found statistically significant differences in retention rates between the compared groups. Another study found that intervention participants stayed in treatment longer than those receiving TAU at the one-month post-randomization assessment, but this difference was not

sustained by the 28-week follow-up time point (Jones et al., 2011).

Morbidity/mortality outcomes: Four studies investigated outcomes related to mortality and morbidity, including overdose risk behaviors, overdose events, other high-risk behaviors such as HIV-risk behaviors or injection use, hospitalizations, and ED visits. Motivational interventions were associated with reductions in the number of overdose risk behaviors (Bohnert et al., 2016), the number of overdose events (Coffin et al., 2017), and the rate of hospital admissions (Gryczynski et al., 2021) compared to control groups.

One study explored the relationship between blended interventions and mortality/morbidity. In that study, the main measure of mortality/morbidity was needle sharing behaviors. Both the intervention and control groups exhibited a decrease in needle sharing behaviors, however, only the intervention group demonstrated a statistically significant reduction in syringe sharing behaviors (Otiashvili et al., 2012).

Limitations

Although the studies included in this review used strong research designs, they were not without limitations. The studies varied widely in terms of sample size, and some of the smaller studies may have been underpowered to detect statistically significant differences between the MI/MET and control groups. The structure and design of the motivational interventions also varied substantially across studies in terms of the number of sessions (ranging from 1 to 22), length of intervention sessions (ranging from 20 mins to one hour), and delivery methods. The variation in intervention design makes it challenging to directly compare results and determine the optimal "dose" and format of MI/MET for effectively addressing OUDs. Additionally, several studies examined blended interventions where MI/MET was combined with other treatment components, making it difficult to isolate the specific effects of MI/MET. The literature on MI/MET interventions also appeared to lack studies that used objective measures of drug use, such as drug test results. Most studies relied on self-reported measures of drug use, which can be subject to recall bias and social desirability bias. Finally, while most studies had follow-up assessments, the follow-up periods ranged from 1 month to 3 years, with several

studies finding fading intervention effects over time. Additional long-term follow-up with a greater number of individuals would help assess the durability of the effects of MI/MET on opioid use and related outcomes.

Conclusion

The studies reviewed provided mixed but generally promising evidence for the effectiveness of MI/MET in improving outcomes for individuals with OUD. Several studies found MI/MET led to reduced opioid use, better treatment retention, and decreased overdose risk behaviors and events compared to control conditions, at least in the short-term. However, some studies found no significant differences between MI/MET and comparison groups on drug use and other outcomes. It is also noteworthy that all studies that monitored fidelity found adequate or strong adherence to intended intervention protocols.

The substantial heterogeneity across studies in terms of MI/MET intervention characteristics, study populations, and outcome measures make it challenging to draw definitive conclusions. Nonetheless, the current evidence suggests MI/MET is a feasible and potentially effective approach that may enhance motivation, treatment engagement, and improve drug use outcomes when incorporated into treatment for OUD. More high-quality research with rigorous designs, objective outcome measures, and adequate sample sizes is needed to establish the efficacy of MI/MET for OUD. Although MI is versatile enough to be integrated with other treatment models and can be applied in various settings, future studies should be designed in ways that allow researchers and practitioners to understand the unique or additive effects of the MI or MET components. Adaptations of MI/MET to different cultural contexts and specific populations (e.g., hospital patients with prescription OUDs, syringe exchangers, homeless individuals) warrant further study.

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