RESEARCH SUMMARY BRIEF

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

The Diagnostic and Statistical Manual of Mental Disorders, 5th ed., (DSM–5TR) defines Alcohol Use Disorder (AUD) as "a problematic pattern of alcohol use leading to clinically significant impairment or distress" (American Psychiatric Association [APA], 2022). An individual may be diagnosed with AUD when they meet at least two of several criteria within a 12-month period including increased use over time, impaired ability to stop or control use, cravings, withdrawal symptoms, increased tolerance, and continued use despite negative consequences to one's health, psychological well-being, work, and social relationships (APA, 2022). According to the 2023 National Survey on Drug Use and Health (Substance Abuse and Mental Health Services Administration [SAMHSA], 2024), overall alcohol use among U.S. individuals aged 12 and older increased from 132.5 million (47.4% of the population) in 2021 to 134.7 million (47.5%) in 2023. In 2023 alone, approximately 134.7 million Americans aged 12 and older reported drinking alcohol in the past month, of these individuals 61.4 million (45.6%) reported binge use, and 16.4 million (12.2%) reported heavy alcohol use. In Ohio statewide drinking habits align with national averages. In 2023, 15.6% of adults in Ohio reported binge drinking, compared to the national median of 15.2% (Centers for Disease Control and Prevention [CDC], 2024a). The CDC estimated that 6,750 Ohioans died from excessive alcohol use between 2020 and 2021 (CDC, 2024b).

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 AUD.

MI and 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

A literature review was conducted in 2024 to investigate outcomes associated with using MI or MET to address alcohol use disorder. The literature review included searching multiple research databases: PsycINFO, CINAHL, MEDLINE, SocINDEX, and the Psychology and Behavioral Sciences Collection. Fifteen articles met eligibility criteria for a full review. Twelve studies evaluated MI

and three studies evaluated blended interventions where MET was part of the intervention. All 15 studies used experimental[1] designs and were conducted in the U.S., with one being a multinational study that also included data from other countries (Andersen et a., 2020). Table 2 outlines outcomes and types of special populations represented in the reviewed studies. Fidelity was monitored in 14 of the 15 studies.

Table 2. Description of Reviewed MI/MET for AUD Studies (Total n=15)

Outcomes	Alcohol use (n=15) Treatment retention (n=8) Mortality/morbidity (n=2)
Special populations	Individuals experiencing housing insecurity (n=1) Women (n=4) Older adults (n=1) Individuals who were incarcerated (n=1) Patients with HIV (n=1) Army personnel (n=1) Veterans (n=3)

Findings

Studies that examined the effect of MI/MET focused on outcomes such as alcohol use, treatment retention, and mortality/morbidity with sample sizes ranging from 40 to 693 participants. The number of MI/MET sessions ranged from one to 12 among the studies that reported this information. Twelve out of 15 studies specifically examined outcomes of MI or MET, although one included a blended intervention in a later stage of the study (Morgenstern et al., 2021). All 12 studies focused on alcohol use outcomes, while six reported retention-related outcomes, and one investigated mortality and/or morbidity related outcomes. Due to their distinct nature, findings about blended interventions will be discussed separately from MI/MET.

Alcohol use outcomes: In studies that assessed the impact of MI/MET, alcohol use was most often measured through self-report. Two studies used urine drug tests to measure alcohol use (Polcin et al., 2019a; Santa Ana et al., 2021). Authors often reported the number of drinks per week, drinking frequency, frequency of heavy drinking, and number of abstinent days. Studies were classified into three categories based on their reported outcomes. They were deemed to have a positive result if the majority of analyses showed statistically significant results favoring MI or MET. Studies were categorized as having mixed results if they reported both positive and neutral or negative outcomes. Lastly, studies were classified as having no effect if no statistically significant results were observed.

Twelve studies investigated the effectiveness of MI/MET in reducing alcohol use outcomes among individuals with OUD. Of these, six studies found that MI/MET helped reduce alcohol use (Walker et al., 2017; Collins et al., 2019; Polcin et al., 2019a, 2019b, 2022; Santa Ana et al., 2021), three studies showed promising but mixed results (Dieperink et al., 2014; Owens & McCrady, 2016; Morgenstern et al., 2021), and three studies found no statistically significant differences between the intervention and control groups (Morgenstern et al., 2017; Bradley et al., 2018; Stasiewicz et al., 2023).

Promising results emerged in the three studies that assessed the impact of blended interventions on those with AUD. In their comparison of individual and group-based cognitive behavioral therapy that included elements of MI, Epstein et al. (2018) found that both approaches were equally effective in reducing drinking among women. Edelman et al. (2019) compared integrated stepped alcohol treatment (ISAT) to treatment as usual for individuals with HIV and AUD, finding no significant differences in alcohol use outcomes between the two groups, except for a higher proportion of abstinent days in the ISAT group at 52 weeks. Andersen et al. (2020) found no significant effect of the addition of CRA-S to MET compared to MET alone, although both groups had reductions in drinking. Overall, these studies suggest that blended motivational interventions can be effective in reducing alcohol use.

Treatment retention outcomes: Six studies that assessed the impact of MI/MET examined treatment retention outcomes, with only one study conducting statistical comparisons and finding no significant differences between the groups (Santa Ana et al., 2021). Five studies that did not conduct statistical comparisons found high and comparable rates of

[1] participants randomly assigned to no treatment or either MI/MET or another form of treatment

retention across treatment conditions (Collins et al., 2019; Dieperink et al., 2014; Morgenstern et al., 2021; Polcin et al., 2019a; Walker et al., 2017).

Two studies that examined blended interventions reported treatment retention outcomes and only one conducted statistical comparisons (Epstein et al., 2018). In their comparison of individual (I-FS-CBT) and group-based cognitive behavioral therapy (G-FS-CBT), Epstein et al. (2018) reported that women in the I-FS-CBT group attended statistically significantly more sessions on average (mean = 9.7) compared to those in the G-FS-CBT group (mean = 7.6). In addition, women in the I-FS-CBT group stayed in treatment for about 10 days longer than those in the G-FS-CBT group.

In their multinational study, Andersen et al. (2020) found that participation rates varied across sites for both MET plus CRA-S and MET-alone groups. Eighty-three percent of the MET-only group and 88% of MET plus CRA-S group completed all four sessions of MET. Regarding the additional CRA-S sessions for the MET plus CRA-S group, 37% of participants attended all eight CRA-S sessions.

Morbidity/mortality outcomes: One study examining the impact of MET and another examining the impact of blended interventions reported morbidity/mortality outcomes. Dieperink et al. (2014) reported a total of 14 adverse events among participants in the control group and seven such events among those enrolled in the MET group. Edelman et al. (2019) examined mortality/morbidity related outcomes by investigating undetectable HIV viral loads. The study compared the effects of ISAT and treatment as usual on HIV outcomes among 128 individuals living with an HIV and AUD. Despite reporting no group differences in the proportion of participants with an undetectable HIV viral load at week 24, the study found that the proportion was significantly higher at week 52 in the ISAT group than in the treatment as usual group.

Limitations

This literature review provided some valuable insights into the effectiveness of MI or MET along with blended motivational interventions, but it was not without limitations. The search process was systematic, yet it was confined to studies published within the last 10 years and conducted in the U.S. resulting in the exclusion of valuable research from earlier time periods or countries. The review also included only quantitative studies with experimental designs, however, it might have overlooked important findings from smaller, observational and/or qualitative studies that could have provided additional context or nuance to the understanding of the effectiveness of MI and MET. Moreover, studies were included only if the whole sample or the majority of it had a diagnosis of AUD.

Limitations also stem from the considerable differences in types of study interventions and number of treatment sessions. For example, some studies examined brief, single-session interventions, while others investigated more intensive approaches. Comparison groups also varied widely, ranging from treatment as usual to other active interventions, with some comparing different types of MI or another active intervention. This variety of comparison strategies created obstacles in drawing definitive conclusions about the relative effectiveness of MI and MET.

Other methodological variations posed limitations. Many studies relied heavily on alcohol use measures based on self-report, which is subject to recall and social desirability biases. While some studies incorporated objective measures to validate self-reported data, this was not consistent across all studies. Operationalization of alcohol use also varied across studies with most using multiple measures to assess the outcome. As such, many studies looked at number of drinks per week or binge or heavy drinking. This also made direct comparisons challenging.

Finally, only two studies had follow-up assessments. Additional research including long-term follow-up of a large sample would help assess the durability of the effects of MI or MET on alcohol use and related outcomes. Despite these limitations, this review provides valuable insights into the current state of research on MI and MET for AUD.

Conclusion

The results of the review suggest that motivational interventions can be effective in reducing alcohol consumption. Six out of 12 studies focusing on MI/MET reported positive outcomes, while three showed mixed results. Intensive MI showed promise for heavy-drinking women, suggesting that tailored MI interventions may be more effective for special

populations. Studies with mixed results also lend some evidence to effectiveness of MI or MET for at least some measures of alcohol use, such as increases in the number of abstinence days. However, it's important to note that three studies found no significant effect of MI/MET compared to control conditions, highlighting the need for further research to understand the factors that influence intervention effectiveness. Studies examining blended motivational interventions showed promising results, with all three reviewed studies reporting reductions in alcohol use at least in some of the measures.

Treatment retention was examined to a lesser extent, yet the majority of the studies reported high retention rates. Mortality or morbidity outcomes were almost nonexistent in the reviewed literature. While it is understandable that researchers focus on more easily measured proxy outcomes like alcohol use, it may be assumed that reductions in alcohol consumption will translate to decreased morbidity and mortality in the long term.

Because this review included articles published within the last ten years, we searched for reviews published between 2010 and 2014 to learn the impact of motivational interventions on alcohol use among the older studies. This secondary review also suggested that motivational interventions could help reduce alcohol use (Barnett et al., 2012; Foxcroft et al., 2016; Jensen et al., 2011).

In conclusion this review highlights the potential of MI and MET in treating AUD. The studies comparing different versions of MI-based interventions provide valuable insights into the potential effectiveness of varying intensities, components, and delivery formats of motivational interventions. 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 compared to control conditions. Adaptations of MI or MET to different cultural contexts and specific populations (e.g., youth engaged in underage drinking, survivors of sexual assault, individuals engaged in opioid use disorder recovery) warrant further study.

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