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Evaluating the mechanisms of change in motivational interviewing in the treatment of mental health problems: A review and meta-analysis

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HIGHLIGHTS

- Motivational interviewing (MI) is useful in the treatment of a variety of mental health problems.
- Previous meta-analyses of MI mechanisms of change are limited to substance using populations.
- This review examined change mechanisms in patients diagnosed with anxiety, mood, eating, psychotic, and comorbid conditions.
- Research should further examine MI mechanisms of change in diverse populations.

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ABSTRACT

Motivational interviewing (MI) has proven useful in the treatment of a variety of mental health problems, however the mechanisms of MI's success within these populations remain unknown. This review is a first attempt to investigate and meta-analyse MI mechanisms of change research conducted with participants who suffer mood, anxiety, psychotic, eating disorders, and comorbid conditions. Twenty studies met inclusion criteria and examined a range of potential MI mechanisms, including patient motivation and confidence, patient resistance, and engagement. Results indicated that while MI did not increase patient motivation more so than did comparison conditions, MI showed a favourable effect on patient engagement variables. However, medium to high levels of heterogeneity were detected for patient engagement, indicating significant differences between studies. Heterogeneity was somewhat explained through subgroup analyses examining the effect of comparison condition and participant diagnosis. Overall, there were few MI mechanisms of change available for review, though the results suggest that patient engagement with treatment may be a potential mechanism of change in populations diagnosed with anxiety, mood, and psychotic disorders.

Contents

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1. Introduction

Motivational Interviewing (MI) is a patient centred directive method of facilitating change that aims to enhance motivation through the exploration and resolution of ambivalence (Miller & Rollnick, 1991). MI was originally developed to treat substance use disorders, however, the application of MI has extended to a growing list of psychological and physical health issues. Meta-analytic research provides support for the efficacy of MI in the treatment of physical activity, dietary change, and diabetes (Martins & McNeil, 2009), and gambling and general health promoting behaviours (Lundahl, Kunz, Brownell, Tollefson, & Burke, 2010). There is also a growing evidence base to suggest that MI is useful as an adjunctive treatment to enhance treatment outcomes for patients presenting with anxiety disorders (Aviram & Westra, 2011; Westra, Arkowitz, & Dozois, 2009; Westra & Dozois, 2006), eating disorders (Cassin, von Ranson, Heng, Brar, & Wojtowicz, 2008), and comorbid mental health and substance use conditions (Martino, Carroll, Nich, & Rounsaville, 2006; Steinberg, Ziedonis, Krejci, & Brandon, 2004).

Though evidence is mounting for the efficacy of MI in a variety of problem areas, not all research trials have found that MI is linked to positive treatment outcomes. The inconsistent results from research trials do not appear to be related to study methodology or characteristics of the MI intervention. Consequently, an investigation of the mechanisms by which MI exerts its effect in various populations may help to account for differential treatment outcomes (Magill et al., 2014). An understanding of the mechanisms of change in MI may guide the administration of MI in diverse populations and contribute to more positive patient outcomes.

A review by Apodaca and Longabaugh (2009) was the first to explore the field of studies examining potential mechanisms of change in MI in those with a substance use disorder. The review examined both patient (readiness (motivation), confidence, engagement, and experience of discrepancy) and therapist (MI consistent and inconsistent conduct, MI spirit[1] and empathy) factors proposed as mechanisms of change in MI. Each therapist and patient factor was evaluated as a mechanism of change by considering three links in a hypothesised causal chain (Shown in Fig. 1): Link 1, the relationship between MI and the proposed mechanism (therapist/patient behaviour); Link 2, the relationship between therapist and patient behaviour; and, Link 3, the extent to which the proposed mechanism (therapist/patient behaviour) is associated with outcome.

Overall, there was some discrepancy as to the extent of the relationship between MI and purported mechanisms and few studies were found to examine Link 2 and Link 3, or provide formal tests of mediation. However, some variables (e.g., patient change talk and therapist use of MI inconsistent behaviour[2]) did behave in a manner that was consistent with MI theory, and were suggested as potential mechanisms of change in MI for substance use disorders (Apodaca & Longabaugh, 2009).

Apodaca and Longabaugh's (2009) research offers a framework for the investigation of potential MI mechanisms and the findings provide insight as to the types of mechanisms that have been examined in the MI literature. However, the review only examined studies in the field of substance use. There was no elucidation of the mechanisms of change in MI in other populations. The growing application of MI to a variety of mental health problems calls for an examination of mechanisms of change in this area. While MI was not originally intended as a stand-alone intervention for substance use, research has demonstrated the capacity for MI to engender behaviour change in its own right (Miller & Rollnick, 2002). As such MI is often used as a stand-alone treatment for substance use disorders to reduce substance use and improve symptoms. However, in the treatment of psychological disorders such as anxiety and eating disorders, MI is primarily used as an adjunctive treatment with an aim to enhance treatment gains as a result of another treatment. In these areas, employing MI is thought to facilitate patient motivation and engagement in other treatment (e.g., cognitive behavioural treatment; CBT), thereby potentially yielding more positive outcomes (Westra, Aviram, & Doell, 2011). Given that the focus of MI may differ across populations it is possible that the mechanisms of change in MI for substance use disorders may not apply when MI is used for other disorders. There is some evidence that factors such as change talk and MI consistent behaviours are related to treatment outcome in problem gamblers and patients wishing to improve their diet and physical activity (Hodgins, Ching, & McEwen, 2009; Pirlott, Kisbu-Sakarya, Defrancesco, Elliot, & Mackinnon, 2012), however the relevance of MI change mechanisms to the treatment of psychopathological disorders such as anxiety and eating disorders remains to be examined. Given that MI is related to improved treatment outcomes in these diverse mental health populations (Westra et al., 2011), uncovering the mechanisms that contribute to the success of MI treatment may help to tailor MI to specific patient concerns and potentially increase positive therapeutic outcomes.

The purpose of this review is to draw together research that examines MI mechanisms of change in patients diagnosed with mood, anxiety, psychotic, and eating disorders, and patients with comorbid conditions. The review aims to comprehend the spectrum and scope of the research in these areas and also to assess the consistency of the effect of MI mechanisms across a range of conditions. Guided by the purported mechanisms of change examined by Apodaca and Longabaugh (2009) the review focuses on the following mechanisms: patient behaviours (motivation, confidence, engagement, resistance, and experience of discrepancy) and therapist behaviours (MI consistent and inconsistent conduct, MI spirit and empathy). Following Apodaca and Longabaugh's causal model of MI, the following research questions were pursued: What is the effect of MI compared to other treatment modalities on proposed change mechanisms in MI (both therapist and patient behaviours)?; is there a relationship between therapist behaviours and patient behaviours in MI?; and; is there a relationship between proposed change mechanisms in MI and patient outcome, and what is the extent of this relationship?

[1] MI spirit is the relational style emphasised in MI that is characterised by respect for the patient's autonomy, collaboration between patient and therapist, and evocation of the patient's own motivation to change (Miller & Rollnick, 2013).

[2] Therapist use of MI-inconsistent behaviour was less likely to occur in MI, was negatively related to patient engagement and was consistently related to worse outcome (Apodaca & Longabaugh, 2009).