

Evidence Summary

Motivational Interviewing for Behavioral Health Conditions

What is Motivational Interviewing?

Motivational interviewing (MI) is a form of goal-oriented psychotherapy, in which clinicians help clients overcome their ambivalence or lack of motivation toward changing their behavior in positive ways. MI is a method of communication, not a set of techniques, for “eliciting the person’s intrinsic motivation for change” (Miller & Rollnick, 2002, p. 25).

The MI approach originated as a treatment for people with substance use disorders, particularly alcohol use disorder (Miller, 1983), and in response to the “disparaging manner” (Miller & Rollnick, 2013, p. 8) in which practitioners had traditionally treated people with substance use disorders. Miller and Rollnick (2013) stated that even into the 1980s, “addiction treatment in the United States was often highly authoritarian, confrontational, even demeaning, relying on a heavily directing style of counseling” (p. 8). MI, on the other hand, embraces the tenets of humanistic psychology, a school of thought predicated on the innate goodness of people, which stresses relationship building between clinician and client.

MI has since been applied to help people with other health-related issues (Hettema, Steele, & Miller, 2005; Rubak, Sandbaek, Lauritzen, & Christensen, 2005). Burke et al. (2003) pointed out that many practitioners have adapted or modified MI interventions (for example, motivational enhancement therapy); but that no empirical studies “have addressed the efficacy of motivational interviewing in its relatively pure form” (p. 844).

In MI, clinicians are expected to express empathy with clients through reflective listening; develop discrepancy between clients’ goals or values and their current behavior; avoid arguing and direct confrontation with clients; adjust to clients’ resistance rather than oppose it directly; and support clients’ self-efficacy and optimism – while facilitating four overlapping and recurring processes: engaging, focusing, evoking, and planning (Substance Abuse and Mental Health Administration, 2012; Miller & Rollnick, 2013).

MI can be conducted in single or multiple sessions and integrated with other therapies. However, as Martins and McNeil (2009) pointed out, further study is needed to determine the optimal dosage. “Some studies demonstrate significant behavior change after relatively few [motivational interviewing] sessions, whereas others fail to demonstrate significant behavior change after many [motivational interviewing] sessions” (Martins & McNeil, 2009, p. 291).

MI can be conducted one-on-one or in a group setting. Recent studies have demonstrated that people need not be in the same room as clinicians to reap the benefits of MI; sessions can occur over the telephone. In fact, people do not even need to speak to clinicians to reap the benefits. For example, Web-based, self-directed interventions based on MI have been shown to be helpful (Karnes, Meyer, Berger, & Brondino, 2015; Friederichs, Oenema, Bolman, Guyaux, van Keulen, & Lechner, 2014; Webber, Tate, & Quintiliani, 2008).

Theoretical Background

The motivational interviewing (MI) approach was borne out of client-centered therapy (also called person-centered therapy), which was developed by humanistic psychologist Carl Rogers (Miller & Rollnick, 2013; Rogers, 1951). In client-centered therapy, clinicians must behave in a genuine and authentic manner, demonstrate unconditional positive regard, and exhibit empathy toward their clients (Rogers, 1957).

Unlike the approach espoused by Rogers, however, MI is consciously directive; clinicians' interactions with clients are intended to effect change. According to Lundahl and Burke (2009):

[Motivational interviewing] builds on [Leon Festinger's] cognitive dissonance theory and [Daryl Bem's] self-perception theory, both of which describe processes related to attitudinal changes. [Motivational interviewing] attempts to foster dissonance between a client's unhealthy status quo behaviors (e.g., binge drinking, smoking) and their own healthy goals (e.g., live a long life, responsible living, be a good partner) in the hope that focusing on the dissonance will motivate the client to change. Similarly, [motivational interviewing] encourages client speech that favors change – what is termed *change talk* – which is based on Bem's theory that hearing oneself argue for change will increase motivation to change. (p. 1234; internal citations omitted)

MI also comports with the trans-theoretical model of change by Prochaska and DiClemente (1984), which involves five nonlinear stages for behavior change – precontemplation, contemplation, preparation, action, and maintenance. They suggested that people may go back and forth, either progressing toward stable change or reverting to earlier stages. Within this context, clinicians can employ MI to help clients move from precontemplation to action (Miller, 1983).

Applications

As previously stated, MI began as a treatment for people with alcohol use disorders. After it was proven to be effective in encouraging positive behavioral change, clinicians began using MI to treat people with other substance use disorders – and then for a variety of other behavioral and medical conditions.

Typically, clinicians use MI to enhance the effectiveness of other treatments, such as cognitive-behavioral therapy, either prior to or integrated throughout the course of therapy.

Motivational Interviewing for Behavioral Health Conditions

Evidence suggests that MI is useful in engaging patients in the treatment of mood, anxiety, and psychotic disorders (Romano & Peters, 2015). And, a handful of studies have shown it to be beneficial in improving people's smoking habits, depression levels, problems with work or other daily activities related to physical and emotional health, and perceptions of health status (Lindson-Hawley, Thompson, & Begh, 2015; Lee, Choi, Yum, Doris, & Chair, 2015).

MI may be particularly helpful for those individuals who are reluctant to seek mental health treatment, but for whom the consequences of forgoing treatment, especially if they are at risk for suicide, can be grave. For example, King et al. (2015), in their randomized controlled trial of *eBridge* (a Web-based tool that screens university students at risk for suicide, links them to mental health services, and incorporates MI principles), observed that students who used *eBridge* were more willing to consider and engage in mental health treatment, owing in part to a significant reduction in male students' perceived stigma regarding mental health treatment.

Relatedly, MI may help in the treatment of patients who are contemplating suicide. In a small preliminary study of whether MI reduces suicidal ideation among patients in a veterans hospital, Britton, Conner, and Maisto (2012) found that suicidal ideation decreased significantly for those patients who participated in MI sessions.

MI has also been shown to be helpful in the treatment of people with eating disorders – such as binge eating, anorexia nervosa, and bulimia nervosa – especially in combination with other treatments (Cassin, von Ranson, Heng, Brar, & Wojtowicz, 2008; Weiss, Mills, Westra, & Carter, 2013; Golan, 2013; Hötzel et al., 2014; Vella-Zarb, Mills, Westra, Carter, & Keating, 2015). However, Knowles et al. (2013) cautioned that more research is needed before widely adopting motivational interventions to treat people with eating disorders.

MI also helps people with problem gambling. Several studies show that gambling frequency decreased significantly up to a year after treatment, and that gamblers spent far fewer dollars in the first few months after treatment (Yakovenko, Quigley, Hemmelgarn, Hodgins, & Ronksley, 2015).

MI can even be used to help students struggling academically. For example, in a randomized controlled study and replication, middle school students who underwent a session of MI were able to boost their math grades (Strait, Smith, McQuillin, Terry, Swan, & Malone, 2012; Terry, Smith, Strait, & McQuillin, 2013).

Motivational Interviewing for Medical Conditions

In their review of published studies, Martins and McNeil (2009) found motivational interviewing to be beneficial in the treatment of a host of physical health issues by helping encourage lifestyle changes and adherence to treatment. Specifically, patients at risk of diet- and exercise-related health complications, who were treated with MI alone or in combination with other interventions, reported increased self-efficacy related to diet and exercise, increased physical activity, reduced caloric intake, increased fruit and vegetable consumption, and decreased body-mass-index scores. Diabetic patients experienced similar results, in addition to

better control of glucose levels. And, MI was even shown to help patients improve their oral hygiene.

Other studies have found MI to be helpful in reducing other cardiovascular disease risk factors. Specifically, it has helped people control their cholesterol levels and enhance weight loss in overweight and obese people (Armstrong, Mottershead, Ronksley, Sigal, Campbell, & Hemmelgarn, 2011; Bóveda-Fontán et al., 2015; Lee et al., 2015).

In one study, MI proved effective in getting stroke victims to more reliably take their medications to prevent another stroke; however, no other positive improvements were statistically significant (Barker-Collo et al., 2015). Another study, by Ream et al. (2015), found that MI helped cancer patients overcome the fatigue that accompanies the disease and is exacerbated by chemotherapy. MI was also found to help older people with chronic pain (Tse, Vong, & Tang, 2013).

Effectiveness

Motivational interviewing has been demonstrated to be effective, especially in the treatment of substance use disorders, in numerous studies (SAMHSA, 2013). In addition, several meta-analyses have found it to be a legitimate therapy (a search of the PubMed database yielded 27 meta-analyses of motivational interviewing studies).

However, it is hard to draw definitive conclusions about the effectiveness of MI because of the large variation among the published studies (such as in the study designs and treatment fidelity). Also, as previously mentioned, there is a dearth of empirical evidence on the effectiveness of textbook MI; researchers have only evaluated adapted versions (Burke et al., 2003). Further, researchers have yet to fully understand the mechanisms through which MI enhances outcomes (Romano & Peters, 2015).

In addition, it is unclear whether MI is superior to other evidence-based treatments. Researchers evaluating the evidence (Smedslund et al., 2011) have repeatedly concluded that MI is more effective than no treatment, but the evidence is too weak to conclude whether it is better than other existing treatments.

Nevertheless, in their meta-analysis of 48 studies of MI in medical care settings, Lundahl et al. (2013) concluded that the intervention is moderately effective in improving outcomes related to tooth decay, death rate, cholesterol level, blood pressure, HIV viral load, body weight, physical strength, quality of life, amount of alcohol consumed, dangerous drinking, smoking abstinence, marijuana use, self-monitoring, sedentary behavior, patient confidence, intention to change, and engagement in treatment.

Combination Therapy

While it is unclear whether MI is superior to other evidence-based treatments, SAMHSA (2013) concluded that “there is strong evidence suggesting the effects of [motivational interviewing] are greater when coupled with another active intervention such as cognitive behavioral therapy,” based on an analysis of 17 systematic reviews.

For example, Barrowclough et al. (2001) demonstrated that an integrated treatment involving MI, cognitive-behavioral therapy, and family or caregiver intervention was superior to routine psychiatric care for patients with comorbid schizophrenia and substance use disorders. Patients exposed to the integrated treatment experienced marked improvements in their schizophrenia symptoms and increased abstinence from drugs and alcohol over the year-long study period. MI has been proven effective in combination with other interventions in a variety of contexts. Gwadz et al. (2015) observed that a multicomponent intervention that included MI helped people with HIV better adhere to antiretroviral therapy, thereby reducing levels of the virus in their blood. Aviram and Westra (2011) also found that MI improved cognitive-behavioral therapy outcomes for people with generalized anxiety, by reducing resistance to and increasing their engagement with treatment. Finally, Salamati et al. (2013) noticed that hospital personnel were much more diligent about hand washing after they had participated in lectures about hand hygiene, in combination with motivational interviewing.

Additional Resources

The Motivational Interviewing Network of Trainers promotes best practices in the use, research, and training of motivational interviewing. Its website, www.motivationalinterviewing.org, hosts a variety of information, including research, events, and presentations.

References

- Armstrong, M. J., Mottershead, T. A., Ronksley, P. E., Sigal, R. J., Campbell, T. S., & Hemmelgarn, B. R. (2011). Motivational interviewing to improve weight loss in overweight and/or obese patients: A systematic review and meta-analysis of randomized controlled trials. *Obesity Review*, 12(9), 709-723.
- Aviram, A., & Westra, H. A. (2011). The impact of motivational interviewing on resistance in cognitive behavioural therapy for generalized anxiety disorder. *Psychotherapy Research*, 21(6), 698-708.
- Barker-Collo, S., Krishnamurthi, R., Witt, E., Feigin, V., Jones, A., McPherson, K., Aroll, B. (2015). Improving adherence to secondary stroke prevention strategies through motivational interviewing randomized controlled trial. *Stroke*, doi: 10.1161/STROKEAHA.115.011003
- Barrowclough, C., Haddock, G., Tarrier, N., Lewis, S. W., Moring, J., O'Brien, R., McGovern, J. (2001). Randomized controlled trial of motivational interviewing, cognitive behavior therapy, and family intervention for patients with comorbid schizophrenia and substance use disorders. *American Journal of Psychiatry*, 158(10), 1706-1713.
- Bóveda-Fontán, J., Barragán-Brun, N., Campiñez-Navarro, M., Pérula-de Torres, L. Á., Bosch-Fontcuberta, J. M., Martín-Álvarez, R., ... Martín-Rioboó, E. (2015). Effectiveness of motivational interviewing in patients with dyslipidemia: A randomized cluster trial. *BMC Family Practice*, 16(1), 151.
- Britton, P. C., Conner, K. R., & Maisto, S. A. (2012). An open trial of motivational interviewing to address suicidal ideation with hospitalized veterans. *Journal of Clinical Psychology*, 68(9), 961-71.

- Burke, B. L., Arkowitz, H., & Menchola, M. (2003). The efficacy of motivational interviewing: A meta-analysis of controlled clinical trials. *Journal of Consulting and Clinical Psychology*, 71(5), 843–861.
- Cassin, S. E., von Ranson, K. M., Heng, K., Brar, J., & Wojtowicz, A. E. (2008). Adapted motivational interviewing for women with binge eating disorder: A randomized controlled trial. *Psychology of Addictive Behaviors*, 22(3), 417–25.
- Festinger, L. (1957). *A theory of cognitive dissonance*. Evanston, IL: Row, Peterson.
- Friederichs, S., Oenema, A., Bolman, C., Guyaux, J., van Keulen, H. M., & Lechner, L. (2014). I Move: Systematic development of a Web-based computer-tailored physical activity intervention based on motivational interviewing and self-determination theory. *BMC Public Health*, 14(1), 212.
- Golan, M. (2013). The journey from opposition to recovery from eating disorders: Multidisciplinary model integrating narrative counseling and motivational interviewing in traditional approaches. *Journal of Eating Disorders*, 1(19).
- Gwadz, M., Cleland, C. M., Applegate, E., Belkin, M., Gandhi, M., Salomon, N., ... Heart to Heart Collaborative Research Team. (2015). Behavioral intervention improves treatment outcomes among HIV-infected individuals who have delayed, declined, or discontinued antiretroviral therapy: A randomized controlled trial of a novel intervention. *AIDS and Behavior*, 19(10), 1801–1817.
- Hettema, J., Steele, J., & Miller, W. R. (2005). Motivational interviewing. *Annual Review of Clinical Psychology*, 1, 91–111.
- Hötzel, K., von Brachel, R., Schmidt, U., Rieger, E., Kosfelder, J., Hechler, T., Schulte, D., & Vocks, S. (2014). An Internet-based program to enhance motivation to change in females with symptoms of an eating disorder: A randomized controlled trial. *Psychological Medicine*, 44(9), 1947–1963.
- Karnes, S. L., Meyer, B. B., Berger, L. M., & Brondino, M. J. (2015). Changes in physical activity and psychological variables following a web-based motivational interviewing intervention: Pilot study. *JMIR Research Protocols*, 4(4), e129.
- King, C. A., Eisenberg, D., Zheng, K., Czyz, E., Kramer, A., Horwitz, A., & Chermack, S. (2015). Online suicide risk screening and intervention with college students: A pilot randomized controlled trial. *Journal of Consulting and Clinical Psychology*, 83(3), 630–636.
- Knowles, L., Anokhina, A., & Serpell, L. (2013). Motivational interventions in the eating disorders: What is the evidence? *International Journal of Eating Disorders*, 46(2), 97–107.
- Lee, W. W., Choi, K. C., Yum, R. W., Doris, S. F., & Chair, S. Y. (2015). Effectiveness of motivational interviewing on lifestyle modification and health outcomes of clients at risk or diagnosed with cardiovascular diseases: A systematic review. *International Journal of Nursing Studies*, doi:10.1016/j.ijnurstu.2015.09.010
- Lindson-Hawley, N., Thompson, T. P., & Begh, R. (2015) Motivational interviewing for smoking cessation. *Cochrane Database of Systematic Reviews*, 3, doi: 10.1002/14651858.CD006936.pub3
- Lundahl, B., & Burke, B. L. (2009). The effectiveness and applicability of motivational interviewing: A practice-friendly review of four meta-analyses. *Journal of Clinical Psychology*, 65(11), 1232–1245.

- Lundahl, B., Moleni, T., Burke, B. L., Butters, R., Tollefson, D., Butler, C., & Rollnick, S. (2013). Motivational interviewing in medical care settings: A systematic review and meta-analysis of randomized controlled trials. *Patient Education and Counseling*, 93(2), 157–168.
- Martins, R. K., & McNeil, D. W. (2009). Review of motivational interviewing in promoting health behaviors. *Clinical Psychology Review*, 29(4), 283–293.
- Miller, W. R. (1983). Motivational interviewing with problem drinkers. *Behavioural Psychotherapy*, 11(2), 147–172.
- Miller, W. R., & Rollnick, S. (2002). *Motivational interviewing: Preparing people to change addictive behavior* (2nd ed.). New York: Guilford Press.
- Miller, W. R., & Rollnick, S. (2013). *Motivational interviewing: Helping people change* (3rd ed.). New York: Guilford Press.
- Prochaska, J. O., & DiClemente, C. C. (1984). *The transtheoretical approach : Crossing traditional boundaries of therapy*. Homewood, Ill.: Dow Jones-Irwin.
- Ream, E., Gargaro, G., Barsevick, A., & Richardson, A. (2015). Management of cancer-related fatigue during chemotherapy through telephone motivational interviewing: Modeling and randomized exploratory trial. *Patient Education and Counseling*, 98(2), 199–206.
- Rogers, C. R. (1951). *Client-centered therapy*. Boston: Houghton Mifflin.
- Rogers, C. R. (1957). The necessary and sufficient conditions of therapeutic personality change. *Journal of Consulting Psychology*, 21, 95–103.
- Romano, M., & Peters, L. (2015). Evaluating the mechanisms of change in motivational interviewing in the treatment of mental health problems: A review and meta-analysis. *Clinical Psychology Review*, 38, 1–12.
- Rubak, S., Sandbaek, A., Lauritzen, T., & Christensen, B. (2005). Motivational interviewing: A systematic review and meta-analysis. *British Journal of General Practice*, 55(513), 305–312.
- Salamati, P., Poursharifi, H., Rahbarimanesh, A. A., Koochak, H. E., & Najafi, Z. (2013). Effectiveness of motivational interviewing in promoting hand hygiene of nursing personnel. *International Journal of Preventive Medicine*, 4(4), 441–447.
- Smedslund, G., Berg, R.C., Hammerstrom, K.T., Steiro, A., Leiknes, K.A., Dahl, H.M., & Karlsen, K. (2011). Motivational interviewing for substance abuse. *Cochrane Database of Systematic Reviews*, 5. doi: 0.1002/14651858.CD008063.pub2
- Strait, G. G., Smith, B. H., McQuillin, S., Terry, J., Swan, S., & Malone, P. S. (2012). A randomized trial of motivational interviewing to improve middle school students' academic performance. *Journal of Community Psychology*, 40(8), 1032–1039.
- Substance Abuse and Mental Health Services Administration. (2012). *Enhancing motivation for change in substance abuse treatment*. Treatment Improvement Protocol [TIP] Series, No. 35. Rockville, MD: U.S. Department of Health and Human Services.
- Substance Abuse and Mental Health Services Administration, National Registry of Evidence-based Programs and Practices. (2013). *Motivational interviewing* [Systematic review]. Retrieved from www.nrepp.samhsa.gov/MotivationalInterviewing.aspx
- Terry, J., Smith, B., Strait, G., & McQuillin, S. (2013). Motivational interviewing to improve middle school students' academic performance: A replication study. *Journal of Community Psychology*, 41(7), 902–909.
- Tse, M. M., Vong, S. K., & Tang, S. K. (2013). Motivational interviewing and exercise programme for community-dwelling older persons with chronic pain: A randomised controlled study. *Journal of Clinical Nursing*, 22(13-14), 1843–1856.

- Vella-Zarb, R. A., Mills, J. S., Westra, H. A., Carter, J. C., & Keating, L. (2015). A randomized controlled trial of motivational interviewing + self-help versus psychoeducation + self-help for binge eating. *International Journal of Eating Disorders*, 48(3): 328–332.
- Webber, K., Tate, D., & Quintiliani, L. (2008). Motivational interviewing in internet groups: A pilot study for weight loss. *Journal of the American Dietetic Association*, 108(6), 1029–1032.
- Weiss, C. V., Mills, J. S., Westra, H. A., & Carter, J. C. (2013). A preliminary study of motivational interviewing as a prelude to intensive treatment for an eating disorder. *Journal of Eating Disorders*, 1(34).
- Yakovenko, I., Quigley, L., Hemmelgarn, B. R., Hodgins, D. C., & Ronksley, P. (2015). The efficacy of motivational interviewing for disordered gambling: Systematic review and meta-analysis. *Addictive Behaviors*, 43, 72–82.

Suggested Reference: SAMHSA's National Registry of Evidence-based Programs and Practices. 2017. *Motivational Interviewing for Behavioral Health Conditions. Evidence Summary*. Rockville, MD: Substance Abuse and Mental Health Services Administration. Retrieved from [\[insert hyperlink\]](#)