

# Motivational Interviewing for Weight Loss

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## KEYWORDS

- Weight management • Motivational interviewing
- Behavioral interventions • Lifestyle counseling

Weight loss interventions have improved over the years, although sustained weight management remains a challenge for overweight individuals and practitioners alike.<sup>1</sup> One approach that has been proposed to enhance the efficacy of behavioral weight loss treatment is motivational interviewing (MI). Although the application of MI in this context is relatively new, emerging research isolating the unique contributions of MI to weight loss treatment<sup>2</sup> suggests that this approach has utility as part of a comprehensive multicomponent behavioral obesity intervention. Therefore, an introduction to MI and the evidence supporting the approach is warranted for practitioners in applied settings who seek to promote weight loss among their patients.

## AN OVERVIEW OF MOTIVATIONAL INTERVIEWING

MI is a patient-centered, directive approach to counseling for behavior change that emphasizes individual autonomy and a collaborative relationship between patient and provider.<sup>3,4</sup> MI strives to help patients move toward behavior change by assisting them in the process of identifying, articulating, and strengthening personally relevant reasons for change and addressing ambivalence about the change. The counseling strategy was initially implemented in the context of problem drinking and has since been successfully adapted to a wide range of challenging behavior problems including weight loss.<sup>5–8</sup> This approach seeks to promote behavior change using an empathic, interactive style that supports self-determination, enhances self-efficacy, and underscores individual control for behavior change. MI differs from a traditional patient education–based approach, which tends to provide advice and information, often in a didactic or prescriptive manner.

A defining characteristic of the MI counseling approach is the collaborative style of the health promotion encounter in which the provider elicits from the patient

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Neither Dr DiLillo nor Dr West has anything to disclose.

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autonomous, personally relevant reasons for behavior change and builds the health promotion message around these goals and concerns. The collaborative relationship between patient and provider does not place the provider in the role of “expert” whose job it is to “fix” the patient by disseminating information on what the patient “should do” or dispensing unsolicited advice. Rather, the provider views the patient as an individual with expertise in his or her own behavior that is critical to the success of the behavior change effort. Consistent with this approach, the provider actively seeks the patient’s input and direction throughout the encounter.

Another hallmark of the MI approach is the elicitation and reinforcement of change talk, or statements made by the patient suggesting personal investment in changing current behavior. Emerging research suggests that change talk predicts actual behavior change.<sup>9</sup> Therefore, significant emphasis is placed on the exploration, enhancement, and elaboration of change talk using techniques such as open-ended questioning, reflective listening, and offering periodic strategic summaries using terms and phrases that patients themselves have generated. A key MI strategy for generating change talk involves framing the targeted lifestyle behavior changes into the context of broader life goals and personal values that the patient holds.

In contrast to some other counseling styles, MI explicitly takes a nonconfrontational approach to the resistance to behavior change that sometimes arises. Within MI, resistance is conceptualized as a function of the patient-provider relationship rather than as a characteristic of an uncooperative or difficult patient who “just does not want to change.” More important, MI views resistance as a sign that a provider has been pushing for behavior change rather than allowing the impetus for change to come from the patient, and this impasse should serve as a signal to the provider to change his or her behavior. MI recommends that providers alter their behavior to sidestep resistance by engaging in reflective listening that mirrors both sides of the ambivalence about change and then refocusing on the elicitation of change talk. This technique is referred to as “rolling with resistance” and is another hallmark feature of MI. Arguing or persuading a patient into behavior change is not consistent with MI (and likely not effective).

### **WHAT IS THE EVIDENCE SUPPORTING MOTIVATIONAL INTERVIEWING FOR WEIGHT LOSS?**

Well-designed research evaluating the efficacy of MI in the context of behavioral weight control tests whether MI, as a distinct intervention offered as an adjunct to a behavioral weight loss intervention, confers any advantages to weight loss outcomes over and above the behavioral intervention alone. Perhaps of particular interest is a small but growing body of research on the efficacy of MI delivered by health care providers to promote weight loss. There are also studies of multicomponent weight management programs that include MI or MI-based strategies as part of an integrated weight loss program. For example, both the Look AHEAD Lifestyle intervention and the Diabetes Prevention Program Lifestyle Balance program demonstrated impressive weight losses, averaging 8% and 7%, respectively.<sup>10,11</sup> Although weight loss outcomes and associated health benefits documented in these studies are compelling, the isolated contributions from MI cannot be disentangled from the other components in the overall treatment package.

### **UNIQUE CONTRIBUTIONS OF MI TO WEIGHT LOSS OUTCOMES**

Studies that provide insight into the unique weight loss enhancements that may be achieved with the addition of MI to behavioral obesity treatment methods have used a randomized controlled study design to directly compare behavioral approaches

augmented by MI to the same behavioral approach without MI. There are a limited number of such studies, but they tend to provide support for the efficacy of MI in enhancing weight loss outcomes. For example, West and colleagues<sup>5</sup> investigated the impact of adding a series of individually delivered MI sessions to a group behavioral weight loss intervention for overweight and obese women with type 2 diabetes. All women were offered a group-based multidisciplinary behavioral weight loss intervention, and study participants were randomized to receive either an additional 5 individual MI counseling sessions or to receive 5 health education sessions (attention placebo control). Results indicated that women who received the MI sessions lost significantly more weight than those in the control condition at the 6-month assessment, and this superior weight loss was maintained through follow-up at both 12 and 18 months. The weight loss advantage was modest (approximately 2 kg of additional weight loss than was achieved with the behavioral program alone), but this advantage was present after only 2 MI sessions. Furthermore, the enhanced weight loss among those receiving MI was mediated by enhanced adherence to specific behavioral recommendations, such as greater self-monitoring and better group attendance.

Carels and colleagues<sup>12</sup> demonstrated a similar benefit of adding MI to a behavioral weight loss program using a stepped care model that provided the MI to individuals who encountered a weight loss plateau. Participants were randomized to receive a comprehensive group-based behavioral weight loss program or to receive the group-based program augmented with MI sessions if they began to struggle with achieving the targeted weight losses. Among participants who struggled and hit a weight loss plateau during the 20-session program, those who were offered MI ultimately lost significantly more weight than their counterparts who hit a plateau but did not receive MI. The authors suggest that this stepped care approach to MI may be particularly well-suited to those individuals who are struggling in a more traditional behavioral weight loss program.

Another small study investigated the utility of adding an MI component to a guided self-help weight loss program.<sup>13</sup> All participants received a total of 8 sessions, 6 of which were self-help materials adapted from the LEARN behavioral weight loss program.<sup>14</sup> Participants were randomized to receive either 2 additional sessions that explored motivational issues using MI techniques or 2 additional sessions that featured a more traditional persuasive approach that emphasized the benefits of weight loss. MI counseling was delivered by clinical psychology graduate students. Although the high overall attrition rates, small sample size, and very limited follow-up period preclude definitive conclusions, the addition of MI to the guided self-help seemed to confer some weight loss advantages in this study. Attrition trended ( $P = .059$ ) toward being lower in the condition that received the MI in addition to the guided self-help compared with those who were offered the more traditional approach to motivation. Further, effect size calculations indicated a small to medium advantage in terms of body mass index reduction for the MI condition. An effect of this magnitude is consistent with other published reports of MI in weight loss.<sup>2</sup>

Not all studies investigating the addition of MI to a behavioral weight loss program have shown clear benefit. With a design similar to that of West and colleagues,<sup>5</sup> Befort and colleagues<sup>15</sup> examined the efficacy of augmenting a culturally targeted group behavioral weight loss program for African American women with MI in comparison with the group program plus a health education attention control. The authors found no MI-related advantage in terms of either program adherence or weight loss. Women in the MI group, however, did report higher satisfaction with individual sessions than participants in the health education group.

The impact of varying levels of MI exposure on weight loss outcomes was explored in a randomized trial that compared a minimal versus enhanced MI-based intervention for weight loss delivered primarily online.<sup>16</sup> All participants in this study were provided an initial face-to-face meeting that incorporated MI strategies and then were offered a self-directed, 16-week behavioral weight loss program featuring content adapted for online use from the intervention implemented in the Diabetes Prevention Project.<sup>17</sup> Half the participants were randomized to attend a weekly MI-based leader-facilitated online chat group (enhanced MI) while the other half of the sample did not have the option to participate in these additional chats. Both groups lost significant weight from baseline; the minimal intervention group lost  $5.2 \pm 4.7$  kg and the enhanced group lost  $3.7 \pm 4.5$  kg. These intervention-related weight losses were not statistically different between the groups. Use of the additional chats by the enhanced group was lower than anticipated, averaging 8 of the 16 available groups. The failure to make full use of available MI-inspired chats may have decreased the potential utility of the intervention. The MI components were delivered by a graduate student with 3 days of training in MI, which raises questions about the skill level of the treatment delivery. This issue of what constitutes adequate training to provide highest quality MI intervention is of strong interest, and definitive standards or guidance are not available at this time.<sup>18</sup> However, the findings that both groups did equally well and that intervention engagement (as evidenced by behaviors such as completion of online self-monitoring logs, posting on message boards, and Web site visits) was related to weight loss in both conditions suggests that delivery of MI from professionals with modest training presents no harm, even if it may not offer specific additive benefit. This conclusion should be reassuring to those implementing MI in applied settings.

Inconclusive outcomes in some studies raise concerns that greater attention to the training and supervision of MI counselors is warranted. Sufficient expertise in MI methods and appropriate ongoing supervision of MI applications are likely necessary for MI to produce the maximum impact on weight loss and treatment engagement outcomes. The studies that do provide evidence for a positive effect of MI on weight loss seem to be ones in which MI was delivered by individuals with greater counseling experience and more MI training.<sup>5,12</sup>

On balance, evidence to date suggests that MI is a promising, well-received intervention that may enhance weight loss among certain populations. A recent metaanalysis of the extant literature in this area reaches a similar conclusion.<sup>2</sup> Given the limited number of weight loss studies that have evaluated MI as an isolated adjunct to standard intervention as well as the lack of uniform results, more research is indicated in order to fully explore how MI may be most effective in boosting weight loss, particularly among men who are often underrepresented in the existing weight management research.

## **MOTIVATIONAL INTERVIEWING FOR WEIGHT MAINTENANCE**

The challenges associated with weight maintenance have prompted researchers to examine MI-based strategies integrated into behavioral programs specifically targeted at weight loss maintenance. For example, the PRIDE trial randomized a cohort of overweight women with urinary incontinence who had completed a 6-month group behavioral weight loss intervention to two different group-based weight maintenance approaches as part of a larger trial.<sup>19</sup> One group of participants was provided a 12-month comprehensive skills-focused maintenance program that is typical of the standard behavioral weight management approach; the other group was randomized to receive a novel 12-month motivation-focused intervention that offered a variety of

strategies for enhancing and maintaining motivation for sustaining behaviors associated with weight loss (eg, physical activity, self-monitoring). The motivation-focused group maintained as much weight loss over a period of 1 year as the traditional skills-focused group. These results suggest that the motivational intervention could serve as a feasible weight maintenance approach to complement the traditional skills refinement programs that are also effective. However, the motivational intervention implemented in this study does not allow the isolation of the unique and specific effects of MI per se, and the results do not indicate that the motivational approach is superior to the traditional approach.

MI may help individuals maintain weight losses achieved after gastric bypass. Stewart and colleagues<sup>20</sup> examined the efficacy of an intervention that combined MI and cognitive behavioral strategies to promote sustained weight loss in a group of patients who had undergone bariatric surgery at least 18 months prior to study enrollment and who were struggling with postsurgical weight gain. Although weight loss outcomes were not formally assessed as part of this pilot study, qualitative feedback suggested that participants learned new maintenance skills and experienced both enhanced motivation and weight loss as a result of the intervention. Future studies focusing on MI for weight maintenance in postsurgical populations would benefit from the addition of objective outcomes such as clinic-assessed weight and measures of adherence.

### **MI DELIVERED IN HEALTH CARE SETTINGS**

One appealing aspect of MI is the potential for the intervention to be delivered by a range of health care providers in clinical settings to target weight loss among their patients. For example, in one study based in a primary care setting, the delivery of MI-based dietary counseling (in person and over the phone) was more effective for promoting weight loss among those at high risk for type 2 diabetes than was the distribution of written materials conveying comparable dietary information.<sup>21</sup> After the intervention, participants in the MI-based counseling group weighed significantly less (mean difference of 1.3 kg) than those in the control group. Further, a significantly greater proportion of those participants who received MI counseling (23.6%) reached the predefined goal of 5% weight loss than did those provided with written materials (7.2%). Similarly, another study demonstrated that overweight and obese individuals who received weight loss counseling from a physician who used MI-consistent techniques were more likely to return to clinic having lost weight than those who received advice to lose weight from a primary care physician who used more MI-inconsistent behaviors.<sup>22</sup>

In a family medicine clinic, McDoniel and colleagues<sup>23</sup> investigated the effects of a technology-delivered weight loss intervention provided to obese patients. In this study, all patients received 2 MI sessions delivered by exercise physiologists plus a series of automated e-mailed newsletters designed to promote weight loss. Additionally, patients were randomized to one of two groups. One group received a standard written nutrition plan and self-monitoring journal. The other group was provided with a smart phone that allowed detailed self-monitoring and provided personalized feedback with a nutrition program tailored to the patient's resting metabolic rate and individual energy expenditure. Both groups lost 3 kg or more over the 12-week intervention, but there were no significant differences between groups. The authors concluded that an MI-based intervention in and of itself is effective in inducing weight loss and that additional technology may not add benefit. However, given that all participants received both MI sessions and nutritional information, it is not possible to disentangle potential independent effects of MI in this study. Further, there was no

control group to offer more definitive evidence of a significant effect of the MI intervention alone.

Brief MI strategies also have been implemented as part of a worksite intervention. Groenveld and colleagues<sup>24</sup> used MI in an attempt to help lower the cardiovascular risk of male workers in the construction industry. Participants were randomized to either a usual care condition, which consisted of brief communication from a physician about their individual risk for cardiovascular disease, or an MI condition, in which participants were offered 7 MI contacts from a nurse or physician over 6 months. As part of the MI intervention, participants could elect to focus on smoking cessation or weight loss–enhancing behaviors (diet and physical activity). Participants who elected to focus on diet and physical activity lost weight (relative to baseline) at both 6 and 12 months, but the loss was not significantly greater than that of patients in other groups. Process evaluations indicated that although the interventionists used many MI-consistent strategies, they did not reach a level of skill that would be considered MI-proficient by standard MI quality control measures. This lesser proficiency may account for the lack of superior efficacy and points to the importance of skilled MI delivery when considering the potential magnitude of additive benefit achieved with MI.

### ISSUES RELATED TO TRAINING

The amount of training necessary to ensure adequate MI skill development among practitioners seeking to promote weight loss is not clear at this time. Standard recommendations are to obtain formal MI training and receive performance feedback to cultivate adequate MI skills. Providers may find that obtaining MI training enhances their interactions with patients beyond the scope of weight loss per se, given the range of behavior change targets that seem to benefit from an MI approach. Evidence of benefits for using MI to address such common issues as smoking cessation,<sup>25</sup> medication adherence,<sup>26,27</sup> and preventive screening behaviors<sup>28,29</sup> argues for acquiring MI proficiency to promote adherence with a broad range of treatment recommendations.

Practitioners interested in developing proficiency in MI skills should begin by becoming familiar with MI's basic principles through participation in a workshop led by a certified trainer. Although this initial training is key for understanding the fundamentals of MI,<sup>30</sup> additional practice and supervision that includes regular feedback is critical to the development of proficiency in the delivery of MI-based interventions.<sup>31</sup> This approach to training can facilitate the development and refinement of MI skills and provides the practitioner personalized feedback about strengths and areas for improvement. Although it may be impractical for practitioners to obtain this level of MI training, a more limited exposure to an MI approach can foster the collaborative, patient-centered spirit of MI and improve counseling interactions.

### COST-EFFECTIVENESS

One question that remains to be thoroughly explored is whether MI strategies for the promotion of weight loss are cost-effective. Although MI has been shown to be cost-effective for addressing some other health-related behaviors such as relapse prevention for smoking among low-income pregnant women<sup>32</sup> and alcohol-related risk behavior among adolescents,<sup>33</sup> no studies to date have addressed the cost-effectiveness of an isolated intervention for MI in the context of behavioral weight control. That being said, treatment packages for weight loss that incorporate MI strategies more diffusely such as the Diabetes Prevention Project have been shown

to be cost-effective because of the pronounced impact that successful weight loss has on a variety of health-related outcomes.<sup>34</sup> These encouraging findings underscore the need for well-designed research that investigates the cost-effectiveness of MI as an isolated component of behavioral weight control strategies.

### TRANSLATIONAL RESEARCH

Finally, there is continued need for additional high-quality translational research to explore more fully the parameters of applied contexts in which MI is efficacious and with which populations MI may be most helpful for the long-term management of weight. Many of the relevant studies to date were designed as highly controlled efficacy trials targeting specific populations with MI delivered by highly trained individuals. As a result, additional studies focused on the feasibility and utility of MI for weight loss in more real-world settings with more representative patient populations are warranted.

### SUMMARY

MI is a patient-centered directive counseling style that aims to facilitate patients' likelihood of making behavior change through the exploration and strengthening of personal motivations. Hallmarks of MI include a collaborative relationship between patient and practitioner, a focus on the elicitation and enhancement of change talk, a nonconfrontational style, and a concerted effort to minimize resistance. MI has been applied to a variety of health-related behaviors, and a growing body of research suggests that this approach may be useful in the context of behavioral weight management.

Although results are not uniform, the majority of research suggests that MI delivered as an independent component in addition to a behavioral weight loss program can augment weight loss and likely exerts its beneficial effects through enhancement of treatment engagement and adherence to behavioral recommendations. Furthermore, preliminary research suggests that MI may be helpful in promoting weight maintenance after an initial loss has been achieved.

Given that behavioral weight management is a relatively new application of MI, a variety of issues merit further investigation. Of particular interest are issues related to the type and extent of provider training necessary to ensure adequate skill development, cost-effectiveness of MI, and translational research to determine the feasibility and effectiveness of incorporating MI strategies into real-world weight loss settings.

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