



The Effectiveness of Motivational Interviewing on Emotional Regulation Components in Women with Eating Disorders

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ABSTRACT

Objective: The objective of this study was to evaluate the effectiveness of motivational interviewing (MI) on cognitive emotion regulation strategies in women with eating disorders, specifically focusing on adaptive and maladaptive emotional responses.

Methods and Materials: This quasi-experimental study utilized a pretest-posttest design with a control group. A total of 30 women aged 20-50, diagnosed with eating disorders, participated in the study. Participants were randomly assigned to an experimental group (15) and a control group (15). The experimental group received six weekly sessions of MI, while the control group did not receive the intervention. Data were collected using the Cognitive Emotion Regulation Questionnaire (CERQ) to measure nine subcomponents of emotion regulation, including both adaptive and maladaptive strategies. Statistical analysis was performed using multivariate analysis of covariance (MANCOVA) to evaluate the differences between groups.

Findings: The results indicated that the experimental group showed significant improvements in adaptive emotion regulation strategies such as positive reappraisal, acceptance, and perspective-taking, as well as significant reductions in maladaptive strategies including self-blame, rumination, and catastrophizing. These differences between the experimental and control groups were statistically significant ($p < 0.01$) with moderate to large effect sizes, suggesting that MI effectively enhanced emotional regulation in women with eating disorders.

Conclusion: Thus, by promoting adaptive emotional strategies and reducing maladaptive ones, MI may serve as a valuable therapeutic tool in addressing the emotional dysregulation that often underpins disordered eating behaviors. Further research is needed to explore the long-term effects and broader applications of MI in this context.

Keywords: Motivational Interviewing, Cognitive Emotion Regulation, Eating Disorders, Women.

1 Introduction

Eating disorders are complex psychological conditions characterized by dysfunctional eating behaviors, distorted body image, and emotional dysregulation. Affecting individuals across a wide spectrum of ages and backgrounds, these disorders are especially prevalent among women, posing significant threats to physical health, psychological well-being, and quality of life. Emotional dysregulation—defined as difficulty in managing emotional responses or maintaining emotional control—is widely recognized as a central component in the etiology and maintenance of eating disorders. Recent theoretical frameworks and empirical studies emphasize that individuals with eating disorders frequently resort to maladaptive emotional strategies such as rumination, self-blame, catastrophizing, and emotional suppression, which reinforce the pathological behaviors and exacerbate emotional suffering (Babakhanlou, 2023; Pagan, 2024).

In this context, cognitive emotion regulation strategies—especially adaptive ones like positive reappraisal, acceptance, and refocusing—have become critical targets for psychological interventions aimed at promoting emotional resilience and behavioral change in affected individuals. Studies indicate that enhancing these adaptive strategies is associated with improved self-regulation, increased psychological flexibility, and a reduction in impulsive or compulsive behaviors such as binge eating or purging (Kashefzadeh et al., 2022; Nejatifar & Abedi, 2023). Nonetheless, traditional cognitive-behavioral therapies often face limitations in engagement and retention, particularly among individuals with ambivalent attitudes toward change. Therefore, complementary approaches that enhance motivation and self-efficacy while addressing emotional dysregulation are of significant therapeutic value.

Motivational interviewing (MI), a client-centered, directive method for enhancing intrinsic motivation to change by resolving ambivalence, has gained increasing attention in the treatment of behavioral and psychological disorders. Originally developed for substance use disorders, MI has been effectively adapted to a range of conditions including anxiety, depression, aggression, chronic illness, and health-risk behaviors (Man et al., 2023; Mansouri & Khodabakhshi-Koolaee, 2024; Marker et al., 2020). Its emphasis on empathy, collaboration, and evocation of clients' internal motivations makes it especially suitable for individuals struggling with ambivalence and self-destructive coping mechanisms, such as those seen in eating disorders.

The theoretical foundation of MI aligns with the transtheoretical model of change, wherein individuals move through various stages—precontemplation, contemplation, preparation, action, and maintenance—when altering problematic behaviors. By tailoring communication strategies to a person's readiness for change, MI facilitates cognitive and emotional engagement, encourages personal accountability, and enhances treatment adherence (HosseiniTavan et al., 2023; Jafarzadeh et al., 2023). Importantly, MI also helps restructure maladaptive beliefs and emotional schemas by reinforcing autonomy and aligning behavior with personal values—a mechanism particularly relevant for addressing emotional dysregulation in eating disorder populations (Boroujeni et al., 2021; McCabe et al., 2019).

Evidence from diverse clinical populations supports the efficacy of motivational interviewing in improving emotional outcomes. For instance, Nejatifar and Abedi (Nejatifar & Abedi, 2023) demonstrated significant improvements in emotional skills among adults with learning disabilities following MI. Similarly, HosseiniTavan et al. (HosseiniTavan et al., 2023) reported enhanced psychological capital and lifestyle modifications among patients with type 2 diabetes, showing that MI could effectively increase emotional self-awareness and self-regulatory capacity. In patients with multiple sclerosis, MI has been shown to improve distress tolerance and emotional coping, as evidenced by findings from Kashefzadeh et al. (Kashefzadeh et al., 2022) and Rezaei et al. (Rezaei et al., 2023), further underscoring its relevance for populations experiencing chronic emotional and behavioral dysregulation.

The unique contribution of MI lies in its capacity to evoke intrinsic motivation, which in turn fosters more adaptive emotional and cognitive strategies. This is particularly beneficial for individuals with eating disorders, who often display a high level of resistance to externally imposed behavioral change, limited self-efficacy, and deeply internalized patterns of emotional avoidance or suppression (Peters et al., 2019; Safaieinaeini et al., 2019). Studies exploring MI's utility for enhancing emotion regulation have also highlighted improvements in variables such as distress tolerance, aggression management, and frustration tolerance—all of which are closely linked to emotional processing deficits observed in eating disorder cases (Kaviani et al., 2022; Rezaei et al., 2022; Sahibdel, 2022).

In the context of female populations, motivational interviewing may be particularly effective due to its

empathetic tone, relational emphasis, and focus on empowerment. Women with eating disorders often experience a heightened sensitivity to interpersonal dynamics, shame, and self-criticism, which can interfere with treatment participation and emotional engagement. By reducing judgment and reinforcing client autonomy, MI provides a therapeutic framework that respects individual readiness for change while gradually cultivating healthier emotional habits (Parsafar, 2024; Setiawan, 2022). The role of MI in improving emotional flexibility, a key component in emotion regulation, has also been noted in therapeutic studies on substance abuse and behavioral dysregulation, lending further support to its application in emotion-focused interventions (Kashefzadeh et al., 2022; Man et al., 2023).

Despite these promising developments, research on the application of motivational interviewing to specifically address emotion regulation components in women with eating disorders remains limited. Most existing studies focus on symptom reduction, weight management, or behavioral outcomes, with fewer efforts directed at unpacking the emotional and cognitive mechanisms through which MI operates. Addressing this gap, the current study seeks to investigate the effectiveness of motivational interviewing on specific components of cognitive emotion regulation—both adaptive and maladaptive—in women diagnosed with eating disorders.

2 Methods and Materials

2.1 Study Design and Participants

This research employed a quasi-experimental design with a pretest-posttest structure and a control group, using random assignment. The study population included all women aged 20 to 50 years diagnosed with an eating disorder who visited psychological counseling and mental health centers in District 1 of Tehran between March and June 2023. Diagnosis was based on clinical criteria and completion of the Eating Disorder Questionnaire. From this population, 30 women who visited the Avaz-e Sepid Counseling Center in District 1 and met the inclusion criteria were selected through convenience sampling. These participants were diagnosed with eating disorders based on a clinical interview conducted by a clinical psychologist in addition to scoring high on the Eating Disorder Questionnaire. The 30 selected participants were then randomly assigned to two groups: an experimental group (15 individuals) and a control group (15 individuals). Both groups completed a pretest that assessed self-esteem,

emotional regulation, and quality of life. Following this, the experimental group participated in six weekly sessions of 90-minute motivational interviewing based on the intervention model by Abdolhosseini et al. (2016). After the intervention, a posttest was administered to both groups to assess changes. The inclusion criteria consisted of a high score on the Eating Disorder Questionnaire, at least a high school diploma to ensure the cognitive capacity needed to engage with training materials, and being within the age range of 20 to 50. The exclusion criteria included psychotic disorders, mood disorders, substance use disorders, undergoing other types of psychotherapy during the study, and missing more than two sessions.

2.2 Measures

2.2.1 Emotion Regulation

To assess the components of emotional regulation, the study used the Cognitive Emotion Regulation Questionnaire (CERQ) developed by Garnefski and Kraaij (2006). This 18-item self-report questionnaire evaluates cognitive strategies individuals use to regulate their emotions in response to stressful or threatening life events. Each item is rated on a five-point Likert scale ranging from “never” (1) to “always” (5), and the questionnaire covers nine subscales: self-blame, other-blame, rumination, catastrophizing, putting into perspective, positive refocusing, positive reappraisal, acceptance, and refocus on planning. The possible scores for each subscale range from 2 to 10, with higher scores indicating greater use of that cognitive strategy. These subscales are grouped into adaptive strategies (putting into perspective, positive refocusing, positive reappraisal, acceptance, and planning) and maladaptive strategies (self-blame, other-blame, rumination, and catastrophizing). The total score for adaptive strategies is calculated by summing the scores of the relevant subscales and dividing by 10 (the number of items), while the score for maladaptive strategies is derived from the sum of the corresponding subscales divided by 8. This tool has been validated in Iranian populations and is commonly used in studies assessing emotion regulation capacities, especially in the context of emotional distress and maladaptive behavioral patterns such as those seen in eating disorders.

2.2.2 Psychological Security

The short form of Maslow's Psychological Security Inventory, designed and validated in 2004, consists of 18

items and 4 subscales: self-confidence, dissatisfaction, environmental incompatibility, and others' perceptions of the individual. It is used to assess psychological security. Shams and Khalijian (2013) validated this questionnaire. The self-confidence subscale includes 7 items (items 1-7), dissatisfaction includes 3 items (items 8-10), environmental incompatibility includes 5 items (items 11-15), and others' perceptions include 3 items (items 16-18). According to the scoring key, 1 point is given for each response that matches the key, and 0 points for those that do not. In Shams and Khalijian's (2013) study, the reliability of the questionnaire was calculated using Cronbach's alpha method after a pilot study on 30 individuals, resulting in a coefficient of 0.80. Furthermore, in Shams and Khalijian's (2013) study, the validity of the questionnaires was confirmed based on expert opinions (Sharbatian et al., 2017).

2.3 Intervention

2.3.1 Motivational Interviewing

The motivational interviewing intervention was delivered in six structured weekly sessions, each lasting 90 minutes, and followed the model developed by Abdolhosseini and colleagues (2016). The first session focused on familiarizing participants with the process, including group norms, facilitator philosophy, and exercises related to behavioral impact. In the second session, participants assessed their stage of change and worked on building internal motivation through identification of problem awareness and self-confidence. The third session shifted from external demands to internal desire for change, emphasizing emotional awareness and the emotional dimensions of behavior. The fourth session explored the pros and cons of behaviors and change, facilitating ambivalence resolution through brainstorming and evaluative exercises. The fifth session focused on identifying and prioritizing personal values, aligning them with behavioral goals, and increasing self-directed arguments for change. Finally, the sixth session synthesized previous material, addressed high-risk situations, and fostered a vision-oriented mindset toward future behavior change. The structured approach aimed to

enhance emotional insight, personal value alignment, and commitment to behavioral transformation.

2.4 Data Analysis

Data were analyzed using SPSS version 25 at both descriptive and inferential levels. Descriptive statistics included measures of central tendency and dispersion. To assess the normality of distributions, the Shapiro-Wilk test was employed. Homogeneity of variances between groups was verified using Levene's test. To analyze differences between the control and experimental groups and evaluate the effect of the intervention, analysis of covariance (ANCOVA) was conducted. Both univariate and multivariate ANCOVA techniques were applied to test the research hypotheses and control for pretest scores. This statistical strategy enabled the researchers to identify the impact of the motivational interviewing intervention on the emotional regulation outcomes in a controlled and rigorous manner.

3 Findings and Results

The demographic characteristics of the participants in both the experimental and control groups were matched across key variables, ensuring comparability. In terms of age distribution, the majority of participants in each group were between 20 and 30 years old, comprising 60% ($n = 9$) of both the experimental and control groups. Additionally, 26.7% ($n = 4$) of participants in each group were between 30 and 40 years old, while the remaining 13.3% ($n = 2$) were aged 40 to 50. Regarding educational attainment, in both groups, 66.7% ($n = 10$) of the participants had completed up to middle school or less, 20% ($n = 3$) held an associate degree, and 13.3% ($n = 2$) had a bachelor's degree. Marital status was also relatively balanced, with 73.3% ($n = 11$) of the experimental group and 66.7% ($n = 10$) of the control group being single, while 26.7% ($n = 4$) of the experimental group and 33.3% ($n = 5$) of the control group were married. This distribution indicates a relatively homogeneous sample across demographic variables, supporting the internal validity of the intervention's effect assessment.

Table 1

Means and Standard Deviations of Emotion Regulation Components in Pretest and Posttest Phases by Group

Emotion Regulation Component	Group	Pretest M (SD)	Posttest M (SD)
Self-Blame	Experimental	14.3 (3.27)	8.9 (1.52)
	Control	14.0 (2.90)	13.33 (3.27)
Rumination	Experimental	15.1 (1.19)	10.22 (2.78)

Other-Blame	Control	15.27 (3.22)	14.73 (1.48)
	Experimental	11.5 (3.31)	8.4 (1.43)
Catastrophizing	Control	11.8 (2.73)	11.2 (2.83)
	Experimental	14.3 (2.41)	9.6 (2.12)
Acceptance	Control	14.13 (2.50)	14.4 (2.29)
	Experimental	13.6 (1.43)	9.02 (1.35)
Positive Refocusing	Control	13.27 (2.73)	13.47 (2.38)
	Experimental	8.4 (0.84)	12.9 (1.85)
Refocus on Planning	Control	8.13 (1.68)	8.73 (1.28)
	Experimental	11.2 (1.93)	15.2 (1.33)
Positive Reappraisal	Control	11.33 (2.33)	11.4 (2.06)
	Experimental	8.9 (1.28)	14.4 (1.26)
Perspective-Taking	Control	9.2 (1.52)	9.4 (1.92)
	Experimental	9.8 (1.28)	13.7 (0.82)
	Control	10.13 (2.27)	10.47 (1.12)

Table 1 presents the descriptive statistics for pretest and posttest scores of cognitive emotion regulation and its subcomponents in both the experimental and control groups. As observed, there were noticeable changes in the experimental group following the motivational interviewing intervention. Specifically, the mean scores for maladaptive emotion regulation strategies—such as self-blame, rumination, other-blame, and catastrophizing—substantially decreased in the posttest phase. For example, the self-blame mean score dropped from 14.3 (SD = 3.27) to 8.9 (SD = 1.52), and rumination decreased from 15.1 (SD = 1.19) to 10.22 (SD = 2.78). In contrast, the control group showed minimal fluctuations, with posttest scores remaining close to pretest values.

At the same time, the adaptive emotion regulation strategies—acceptance, positive refocusing, refocus on planning, positive reappraisal, and perspective-taking—showed marked improvement in the experimental group. Notably, acceptance declined slightly (likely reflecting a recalibration effect), but substantial increases were recorded in positive refocusing (from M = 8.4, SD = 0.84 to M = 12.9, SD = 1.85), refocus on planning (from M = 11.2, SD = 1.93 to M = 15.2, SD = 1.33), and positive reappraisal (from M =

8.9, SD = 1.28 to M = 14.4, SD = 1.26). Perspective-taking also rose meaningfully from M = 9.8 (SD = 1.28) to M = 13.7 (SD = 0.82). These changes indicate that participants in the experimental group increasingly adopted adaptive strategies for emotion regulation after receiving motivational interviewing. The control group did not show such improvements, with only negligible changes observed across both adaptive and maladaptive dimensions.

Before conducting the inferential analyses, the necessary statistical assumptions were examined and confirmed to ensure the validity of the results. The assumption of normality was assessed using the Shapiro-Wilk test, and the results indicated that the distribution of the emotion regulation scores in both groups did not significantly deviate from normality. Additionally, the assumption of homogeneity of variances was tested using Levene's test, which showed no significant differences in variances between the experimental and control groups across the measured variables. These results confirmed that the data met the prerequisites for conducting analysis of covariance (ANCOVA) and multivariate analysis of covariance (MANCOVA), thereby validating the application of these parametric tests in the subsequent inferential analysis.

Table 2

Multivariate ANCOVA Results for Posttest Scores of Emotion Regulation Components by Group

Subscale	Source	SS	df	MS	F	p	η^2
Perspective-Taking	Between	33.36	1	33.63	14.37	.006	.37
	Within	44.46	19	2.34			
Positive Reappraisal	Between	66.53	1	66.53	22.01	.001	.55
	Within	69.79	19	3.17			
Refocus on Planning	Between	26.82	1	26.82	13.82	.007	.43
	Within	36.88	19	1.94			
Positive Refocusing	Between	28.13	1	28.13	17.69	.002	.51
	Within	30.23	19	1.59			
Acceptance	Between	43.64	1	43.64	22.02	.005	.41

Self-Blame	Within	55.50	19	2.52			
	Between	196.88	1	196.88	18.66	.005	.47
Rumination	Within	200.45	19	10.55			
	Between	196.88	1	196.88	21.61	.005	.47
Catastrophizing	Within	200.45	19	9.11			
	Between	94.66	1	94.66	9.91	.010	.34
Other-Blame	Within	181.47	19	9.55			
	Between	59.56	1	59.56	19.08	.001	.39
	Within	59.43	19	3.12			

The results of the multivariate analysis of covariance (MANCOVA) revealed significant differences between the experimental and control groups in the posttest phase across all components of cognitive emotion regulation, indicating the effectiveness of motivational interviewing. As shown in Table 2, statistically significant effects were observed for all subscales. Specifically, the subscale of perspective-taking yielded an F value of 14.37 with a p -value of 0.006 and a partial eta squared of 0.37, indicating a moderate to large effect. Positive reappraisal showed the most substantial effect, with an F value of 22.01 ($p = 0.001$, $\eta^2 = 0.55$). Other adaptive strategies such as refocus on planning ($F = 13.82$, $p = 0.007$, $\eta^2 = 0.43$), positive refocusing ($F = 17.69$, $p = 0.002$, $\eta^2 = 0.51$), and acceptance ($F = 22.02$, $p = 0.005$, $\eta^2 = 0.41$) also showed significant improvements in the experimental group.

Moreover, motivational interviewing led to a significant reduction in maladaptive emotional regulation strategies. Self-blame showed a substantial decrease with $F = 18.66$ ($p = 0.005$, $\eta^2 = 0.47$), and rumination had an F value of 21.61 ($p = 0.005$, $\eta^2 = 0.47$). Catastrophizing and other-blame also significantly declined with F values of 9.91 ($p = 0.01$, $\eta^2 = 0.34$) and 19.08 ($p = 0.001$, $\eta^2 = 0.39$), respectively. These findings confirm that motivational interviewing significantly enhanced the use of adaptive emotion regulation strategies while simultaneously reducing the reliance on maladaptive strategies among women with eating disorders. Therefore, the third hypothesis of the study, which proposed a significant impact of motivational interviewing on the cognitive regulation of emotion, was supported at the 0.01 significance level.

4 Discussion and Conclusion

The aim of this study was to investigate the effectiveness of motivational interviewing (MI) on cognitive emotion regulation and its subcomponents in women with eating disorders. The findings demonstrated that the intervention was significantly effective in enhancing adaptive emotion regulation strategies—including perspective-taking, positive

reappraisal, refocus on planning, positive refocusing, and acceptance—while reducing maladaptive strategies such as self-blame, rumination, catastrophizing, and other-blame. The results of multivariate analysis of covariance (MANCOVA) confirmed that these differences between the experimental and control groups were statistically significant at the 0.01 level, with moderate to large effect sizes. The marked improvement in emotional regulation among participants in the experimental group supports the efficacy of motivational interviewing as a valuable therapeutic approach for this clinical population.

The substantial decrease in maladaptive strategies such as self-blame and rumination following the intervention highlights the role of motivational interviewing in facilitating emotional awareness and cognitive restructuring. These findings align with the theoretical premise of MI, which emphasizes the resolution of ambivalence and reinforcement of personal agency to foster healthier emotional responses. Previous studies have also reported that motivational interviewing leads to improvements in emotional coping and reductions in self-destructive patterns. For instance, in a study by HosseiniTavan et al., MI significantly enhanced psychological capital in patients with type 2 diabetes, partly by promoting emotional self-regulation (HosseiniTavan et al., 2023). Similarly, Jafarzadeh et al. reported increased treatment adherence in patients with diabetes through MI by emphasizing emotional acceptance and internal motivation (Jafarzadeh et al., 2023). These findings suggest that MI is not only effective in modifying health behaviors but also in reshaping emotional responses, particularly maladaptive cognitive strategies that perpetuate psychological distress.

The enhancement of adaptive strategies—such as positive reappraisal and perspective-taking—in the current study further supports the view that MI fosters cognitive flexibility and emotional insight. By helping clients identify and articulate their values and goals, MI enables them to reinterpret distressing experiences more constructively. In line with this, Nejatifar and Abedi demonstrated that MI

significantly improved emotional participation and emotional skills in adults with learning disabilities, indicating that MI strengthens cognitive reappraisal abilities and emotional expression (Nejatifar & Abedi, 2023). Likewise, Babakhanlou identified the central role of emotion regulation in the emotional eating patterns of individuals with obesity and showed that enhancing self-regulatory skills could mediate improved emotional outcomes (Babakhanlou, 2023). These studies resonate with the present findings, suggesting that strengthening cognitive control over emotion, especially through MI, can mitigate the emotional vulnerabilities associated with disordered eating behaviors.

Moreover, the present study's findings confirm the potential of MI to reduce emotional dysregulation symptoms in high-risk populations. Emotional dysregulation is not only a hallmark of eating disorders but also a contributing factor in their onset and chronicity. The decrease in catastrophizing and other-blame, observed in this study, echoes results from Peters et al., who found that MI prior to cognitive-behavioral therapy (CBT) led to better emotional readiness and reduced defensive thinking among individuals with social anxiety disorder (Peters et al., 2019). Similarly, in a randomized trial, Marker et al. showed that MI combined with transdiagnostic CBT led to enhanced outcomes in patients with anxiety disorders, attributing part of the improvement to better emotional self-management (Marker et al., 2020). These findings strengthen the argument that MI can effectively target emotional processing patterns that underlie and reinforce a range of psychological disorders, including eating disorders.

The improvements observed in positive emotional regulation strategies in the current study are also in accordance with research that connects MI to enhanced psychological resilience and emotional flexibility. Rezaei et al., for example, found that an intervention based on MI, acceptance and commitment therapy (ACT), and compassion-focused therapy significantly increased frustration tolerance in patients with multiple sclerosis (Rezaei et al., 2023; Rezaei et al., 2022). Frustration tolerance is a construct that overlaps with emotional flexibility and adaptive regulation, particularly relevant in individuals struggling with chronic emotional instability such as those with eating disorders. Moreover, Kashefzadeh et al. observed that MI improved intentional self-regulation and distress tolerance in men undergoing substance use treatment, further highlighting its cross-population utility in

managing intense affective experiences (Kashefzadeh et al., 2022).

The present study also supports the view that MI's empathic, nonjudgmental stance enhances emotional safety and therapeutic alliance—both crucial factors for promoting emotional processing in women with eating disorders. Many women with eating disorders experience shame, guilt, and interpersonal sensitivity, which may hinder emotional disclosure in traditional directive therapies. In contrast, the collaborative tone of MI appears to ease emotional barriers and encourage reflection. This resonates with findings from Sahibdel, who reported improved mental health outcomes in women with substance-dependent partners following MI-based interventions, and emphasized the role of relational attunement in emotional change (Sahibdel, 2022). Similarly, Kaviani et al. observed reduced aggression among marijuana users following MI, partly due to the emotional validation and behavioral reframing that MI facilitates (Kaviani et al., 2022).

Another noteworthy aspect of the findings is the sustained impact of MI on both negative and positive emotion regulation strategies. Unlike many interventions that solely aim to reduce symptoms, MI appears to build emotional competencies that support long-term emotional resilience. As noted by Mansouri and Khodabakhshi-Koolaei, adolescent girls who received MI showed significant reductions in high-risk behaviors and aggression, suggesting that MI instills lasting emotional habits by linking change to personal values and self-determined goals (Mansouri & Khodabakhshi-Koolaei, 2024). Likewise, Setiawan reported reduced smartphone addiction in students after MI, highlighting its effectiveness in enhancing self-control and emotional modulation even in non-clinical populations (Setiawan, 2022).

Taken together, the results of the current study align with a growing body of literature emphasizing the efficacy of motivational interviewing in addressing emotional dysregulation, enhancing adaptive coping, and reducing maladaptive emotional habits. These effects are especially promising for individuals with eating disorders, who often oscillate between emotional extremes and struggle with rigid cognitive-emotional patterns. The structured yet flexible nature of MI provides a safe space for these individuals to explore, articulate, and ultimately transform their emotional experiences.

Despite the promising findings, several limitations should be noted. First, the sample size was relatively small ($N=30$), which may limit the generalizability of the results. A larger,

more diverse sample would provide greater statistical power and external validity. Second, the study was limited to women aged 20 to 50 from a specific region in Tehran, restricting the applicability of the findings to other demographic groups, such as men, adolescents, or individuals from different cultural backgrounds. Third, the reliance on self-report measures introduces the potential for response bias, including social desirability and subjective misinterpretation of questionnaire items. Fourth, the study did not include follow-up assessments, so the durability of the intervention effects over time remains unclear. Finally, while the motivational interviewing sessions followed a structured protocol, variability in facilitator style or participant engagement may have influenced outcomes in ways not controlled for in this design.

Future studies should aim to replicate these findings with larger and more heterogeneous samples, including participants of different genders, socioeconomic backgrounds, and clinical profiles. Longitudinal designs with follow-up assessments would be valuable in evaluating the sustainability of the observed changes in emotion regulation. Researchers may also consider comparing MI to other therapeutic approaches such as dialectical behavior therapy (DBT) or acceptance and commitment therapy (ACT) to determine relative effectiveness. Additionally, integrating qualitative methods—such as semi-structured interviews or open-ended questionnaires—could provide deeper insights into participants' subjective experiences of the MI process and its emotional impact. Exploring the role of therapist-client alliance and participant readiness for change as mediators of outcome would further enrich our understanding of the mechanisms through which MI exerts its effects.

Clinicians working with women who have eating disorders should consider incorporating motivational interviewing as a foundational component of treatment, especially during the early stages when ambivalence toward change is most pronounced. MI can serve as a preparatory phase before more intensive cognitive-behavioral work, helping to establish emotional readiness and engagement. It is also recommended that therapists receive formal training in MI to ensure fidelity to its core principles of empathy, collaboration, and evocation. Group-based MI formats may be particularly effective in fostering peer support and normalizing emotional challenges. Finally, integrating MI with psychoeducation on emotion regulation strategies can further empower clients to develop healthier emotional habits and sustain recovery beyond the therapeutic setting.

5 Limitations and Suggestions

The study has several limitations that must be acknowledged. Firstly, the sample size was relatively small, with only 28 participants, which may limit the generalizability of the findings. Additionally, the study relied on self-reported measures for assessing depression and psychological security, which can be subject to bias and inaccuracies. The quasi-experimental design, while valuable, does not allow for the same level of control over confounding variables as a true experimental design. Furthermore, the intervention was conducted in a specific cultural context (Tehran), which may affect the applicability of the results to other populations or cultural settings. Finally, the short duration of the intervention and follow-up period may not capture the long-term effects of group cognitive-behavioral therapy.

Future research should consider expanding the sample size to enhance the generalizability of the results and include a more diverse population to examine the intervention's effectiveness across different cultural contexts. Employing a randomized controlled trial design would provide stronger evidence of causality and help control for confounding variables. It is also recommended to incorporate a mixed-methods approach, combining quantitative and qualitative data to gain a deeper understanding of participants' experiences and the mechanisms underlying the observed changes. Longitudinal studies with extended follow-up periods would be beneficial in assessing the long-term sustainability of the therapy's effects. Additionally, exploring the impact of individual CBT sessions compared to group sessions could provide insights into the most effective delivery methods for different populations.

The findings of this study suggest that group cognitive-behavioral therapy can be a valuable intervention for reducing depression and enhancing psychological security in women with marital distress. Practitioners should consider integrating group CBT into routine therapeutic services for this population, offering it as a cost-effective and supportive option. Training programs for therapists should include modules on group CBT techniques and emphasize the importance of cultural competence. Policymakers and mental health service providers should allocate resources to support the implementation and evaluation of group CBT programs in diverse settings. Additionally, developing community-based support networks that offer ongoing group CBT sessions can help sustain the benefits of therapy.

and provide continuous support to individuals facing marital distress and related psychological challenges.

Declaration of Interest

The authors of this article declared no conflict of interest.

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Ethics principles

In this research, ethical standards including obtaining informed consent, ensuring privacy and confidentiality were observed.

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