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The Effectiveness of Attachment-Based Cognitive Integrative Therapy on Early Maladaptive Schemas, Dysfunctional Beliefs, and Depression

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A B S T R A C T

Purpose: The present study aimed to investigate the effectiveness of attachment-based cognitive integrative therapy on early maladaptive schemas, dysfunctional beliefs, and depressive symptoms in individuals with depression.

Methods and Materials: This study employed a quasi-experimental design with pre-test, post-test, and two-month follow-up, including an experimental group and a control group. The statistical population consisted of individuals with depressive symptoms who referred to psychological counseling centers in Tehran. A total of 40 participants were selected through purposive sampling and randomly assigned into two groups of 20 (experimental and control). The experimental group received 12 sessions of attachment-based cognitive integrative therapy, while the control group remained on a waiting list. Data were collected using the Young Schema Questionnaire–Short Form (YSQ-SF), Dysfunctional Attitude Scale (DAS), and Beck Depression Inventory-II (BDI-II). Data analysis was conducted using repeated measures analysis of variance (ANOVA) and Bonferroni post-hoc tests in SPSS-27.

Findings: The results of repeated measures ANOVA indicated significant effects of time, group, and the interaction between time and group on early maladaptive schemas, dysfunctional beliefs, and depression ($p < 0.001$). The experimental group showed significant reductions in all three variables compared to the control group, with large effect sizes observed across outcomes. Bonferroni post-hoc tests revealed that the differences between pre-test and post-test, as well as pre-test and follow-up, were statistically significant ($p < 0.001$), while no significant differences were found between post-test and follow-up, indicating the stability of treatment effects over time.

Conclusion: Attachment-based cognitive integrative therapy is an effective intervention for reducing early maladaptive schemas, dysfunctional beliefs, and depressive symptoms, with sustained effects over time, suggesting its potential as a comprehensive therapeutic approach targeting both cognitive and relational dimensions of depression.

Keywords: *Attachment-based therapy, Cognitive integrative therapy, Early maladaptive schemas, Dysfunctional beliefs, Depression*

1. Introduction

Depression is one of the most prevalent and debilitating psychological disorders worldwide, characterized by persistent low mood, cognitive distortions, and impaired functioning across emotional, interpersonal, and occupational domains. Contemporary psychological research has increasingly emphasized that depression is not merely a transient emotional state but rather a multifaceted condition rooted in enduring cognitive and relational patterns that develop across the lifespan. Among these, early maladaptive schemas and dysfunctional beliefs have been identified as core cognitive vulnerabilities that shape individuals' perceptions of self, others, and the world, thereby predisposing them to depressive symptomatology and maintaining its chronicity (Çelikbaş & Yalçınkaya-Alkar, 2022; Strand et al., 2024). These maladaptive cognitive structures often originate in early developmental experiences, particularly within attachment relationships, and are subsequently reinforced through cognitive biases and maladaptive coping strategies.

Early maladaptive schemas, as conceptualized in schema theory, represent pervasive and self-defeating emotional and cognitive patterns that are formed during childhood and elaborated throughout life. These schemas are typically associated with unmet emotional needs, adverse caregiving environments, and insecure attachment patterns. Empirical evidence suggests that such schemas play a critical role in the onset and maintenance of depression, as they bias information processing toward negative interpretations and perpetuate dysfunctional emotional responses (Akers et al., 2025; Zarei et al., 2024). Furthermore, dysfunctional beliefs, which include rigid, absolutist, and negative assumptions about the self and environment, are closely intertwined with maladaptive schemas and contribute significantly to depressive cognition. Longitudinal studies have demonstrated that dysfunctional attitudes are robust predictors of depressive symptoms over time, highlighting their central role in vulnerability models of depression (Strand et al., 2024).

Cognitive-behavioral therapy (CBT) has long been established as one of the most effective evidence-based treatments for depression, primarily targeting dysfunctional beliefs and cognitive distortions. Numerous studies have confirmed that CBT interventions lead to significant reductions in negative automatic thoughts and maladaptive cognitive patterns, thereby alleviating depressive symptoms (Salmani et al., 2019; Thakral et al., 2020). However, despite its effectiveness, CBT has been criticized for its limited focus on deeper, schema-level processes and early relational experiences that underlie cognitive distortions. While CBT can modify surface-level beliefs, it may not fully address the entrenched schemas that originate from early attachment disruptions, potentially limiting its long-term efficacy in some individuals (Akers et al., 2025; Zarei et al., 2024).

In response to these limitations, schema-focused and integrative therapeutic approaches have been developed to target deeper cognitive and emotional structures. Schema therapy, for instance, explicitly focuses on identifying and modifying early maladaptive schemas through experiential and cognitive techniques. Research has demonstrated that schema-based interventions are effective in reducing maladaptive schemas and associated emotional distress, often yielding more enduring changes compared to traditional cognitive approaches (Asadi et al., 2025; Ghanavati, 2024). Moreover, integrative approaches that combine cognitive techniques with emotional and relational components have shown promise in enhancing treatment outcomes by addressing both cognitive distortions and underlying emotional needs.

Attachment theory provides a complementary framework for understanding the developmental origins of maladaptive schemas and dysfunctional beliefs. According to this perspective, early interactions with caregivers shape internal working models of self and others, which in turn influence emotional regulation, interpersonal functioning, and vulnerability to psychopathology. Insecure attachment styles, such as anxious and avoidant patterns, have been consistently associated with higher levels of depression, dysfunctional attitudes, and maladaptive cognitive processes (Çelikbaş & Yalçınkaya-Alkar, 2022; Kashani Vahid et al., 2024). These findings underscore the importance of addressing attachment-related processes in therapeutic interventions aimed at modifying cognitive vulnerabilities.

Recent empirical studies have increasingly highlighted the role of attachment-based interventions in improving emotional regulation, cognitive functioning, and psychological well-being. Attachment-based therapies focus on enhancing secure relational patterns, fostering emotional awareness, and restructuring internal working models through corrective emotional experiences. Evidence indicates that such interventions can significantly reduce depressive symptoms and improve emotional autonomy and regulation, particularly among individuals with insecure attachment histories (Seyed Mousavi et al., 2024; Tay-Karapas et al., 2024). Furthermore, attachment-based

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approaches have been shown to influence cognitive processes indirectly by altering underlying relational schemas, thereby contributing to more adaptive belief systems.

The integration of attachment-based and cognitive approaches represents a promising direction in psychotherapy, as it allows for a more comprehensive treatment of depression by addressing both cognitive distortions and their developmental origins. Attachment-based cognitive integrative therapy combines the structured, skills-based techniques of CBT with the relational and emotional focus of attachment theory. This integrative model aims to modify dysfunctional beliefs while simultaneously addressing early maladaptive schemas rooted in attachment experiences. Emerging research suggests that such integrative approaches can enhance therapeutic effectiveness by targeting multiple levels of psychological functioning, including cognition, emotion, and interpersonal relationships (Egli et al., 2024; Walter et al., 2024).

Empirical comparisons between cognitive-behavioral and attachment-based or schema-focused interventions further support the added value of integrative approaches. Studies have demonstrated that interventions incorporating emotional, relational, and schema-focused components yield greater improvements in cognitive regulation, emotional distress, and psychological outcomes compared to purely cognitive methods (Haghiri et al., 2025; Jafari Goloche et al., 2024). Similarly, attachment-based family and individual therapies have been found to significantly enhance emotional regulation and reduce maladaptive patterns, highlighting their effectiveness across different age groups and clinical populations (Ghanavati et al., 2024; Shamsabadi et al., 2024). These findings suggest that addressing both cognitive and attachment-related mechanisms may be essential for achieving sustained therapeutic change.

In addition, recent research has emphasized the role of emotional regulation as a mediating mechanism in the relationship between attachment, cognitive processes, and depression. Difficulties in emotion regulation are closely linked to maladaptive schemas and dysfunctional beliefs, contributing to the persistence of depressive symptoms. Integrative therapies that incorporate emotion regulation strategies alongside cognitive restructuring and attachment-based interventions have been shown to produce significant improvements in depressive outcomes (Egli et al., 2024; Ghanavati, 2024). This highlights the importance of targeting multiple interrelated processes within a unified therapeutic framework.

Despite the growing body of evidence supporting integrative approaches, there remains a need for further empirical investigation into the effectiveness of therapies that explicitly combine attachment-based and cognitive components. While existing studies have examined the individual effects of cognitive-behavioral therapy, schema therapy, and attachment-based interventions, fewer studies have focused on their combined application within a single therapeutic model. Moreover, the simultaneous examination of early maladaptive schemas, dysfunctional beliefs, and depression within such an integrative framework remains relatively limited, particularly in non-Western contexts.

Given these considerations, the present study seeks to address this gap by examining the effectiveness of attachment-based cognitive integrative therapy in reducing early maladaptive schemas, dysfunctional beliefs, and depressive symptoms. By integrating cognitive restructuring techniques with attachment-focused interventions, this approach aims to provide a more comprehensive treatment model that targets both surface-level cognitions and deeper relational schemas. Such an approach is expected to produce more robust and enduring therapeutic outcomes by addressing the multifaceted nature of depression.

Therefore, the aim of the present study is to investigate the effectiveness of attachment-based cognitive integrative therapy on early maladaptive schemas, dysfunctional beliefs, and depression.

2. Methods and Materials

2.1. Study Design and Participants

The present study employed a quasi-experimental design with a pre-test, post-test, and follow-up structure, including an experimental group and a control group. The statistical population consisted of individuals experiencing symptoms of depression who referred to psychological counseling centers in Tehran. Using purposive sampling, 40 participants who met the inclusion criteria—such as a minimum threshold score on depression and maladaptive schema measures, age range between 20 and 45 years, and absence of severe psychiatric disorders—were selected and randomly assigned into two groups of 20 participants each (experimental and control groups). Exclusion criteria included concurrent participation in other psychological treatments, use of psychiatric medications that could interfere with psychological outcomes, and absence from

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more than two therapy sessions. The experimental group received the intervention, while the control group remained on a waiting list during the study period. Measurements were conducted at three stages: pre-test, post-test, and a two-month follow-up.

2.2. Measures

The Early Maladaptive Schemas were assessed using the Young Schema Questionnaire–Short Form, originally developed by Jeffrey Young in 1998. This self-report instrument consists of 75 items designed to measure 15 early maladaptive schemas across five schema domains, including disconnection/rejection, impaired autonomy/performance, impaired limits, other-directedness, and over-vigilance/inhibition. Each schema is represented by five items, and responses are recorded on a 6-point Likert scale ranging from "completely untrue of me" to "describes me perfectly." Higher scores indicate stronger endorsement of maladaptive schemas. The YSQ-SF has demonstrated strong psychometric properties, with high internal consistency coefficients typically exceeding 0.80 for most subscales. Its validity and reliability have been confirmed in multiple international and Iranian studies, supporting its suitability for both clinical and research settings.

Dysfunctional beliefs were measured using the Dysfunctional Attitude Scale developed by Aaron T. Beck and colleagues in 1978. The commonly used version includes 40 items assessing maladaptive cognitive patterns related to perfectionism, dependency, and approval-seeking. Participants respond using a 7-point Likert scale ranging from "totally agree" to "totally disagree." Higher scores reflect more rigid and dysfunctional cognitive attitudes associated with vulnerability to depression. The DAS has consistently demonstrated strong internal consistency ($\alpha > 0.85$) and good construct validity across diverse populations. Previous studies have confirmed its reliability and validity in both Western and non-Western samples, including Persian adaptations, making it an appropriate tool for assessing dysfunctional beliefs in this study.

Depression severity was assessed using the Beck Depression Inventory-II, developed by Beck, Steer, and Brown in 1996. This widely used self-report measure consists of 21 items that evaluate cognitive, emotional, and somatic symptoms of depression over the past two weeks. Each item is scored on a 4-point scale ranging from 0 to 3, with total scores ranging from 0 to 63. Higher scores indicate greater severity of depressive symptoms. The BDI-II has demonstrated excellent internal consistency ($\alpha > 0.90$) and strong convergent validity with other measures of depression. Numerous studies have confirmed its psychometric robustness across cultures, including validated Persian versions, supporting its reliability and validity for use in clinical research.

2.3. Interventions

The intervention consisted of an attachment-based cognitive integrative therapy program delivered to the experimental group over 12 weekly sessions, each lasting approximately 90 minutes. The therapeutic approach integrated principles from attachment theory and cognitive therapy, focusing on identifying and restructuring early maladaptive schemas rooted in insecure attachment experiences, modifying dysfunctional beliefs, and enhancing emotional regulation. Initial sessions emphasized establishing a secure therapeutic alliance and psychoeducation about attachment patterns and cognitive distortions. Middle sessions involved experiential techniques such as imagery rescripting, cognitive restructuring, and schema dialogue to address deeply ingrained maladaptive patterns. Final sessions focused on consolidating gains, developing adaptive coping strategies, and preventing relapse. The intervention was delivered in a group format by a trained clinical psychologist, following a structured manual to ensure treatment fidelity.

2.4. Data Analysis

Data were analyzed using SPSS version 27. Descriptive statistics, including means and standard deviations, were calculated for all variables across measurement points. To examine the effectiveness of the intervention, repeated measures analysis of variance (ANOVA) was conducted to assess within-group and between-group differences over time (pre-test, post-test, and follow-up). Mauchly's test was used to assess the assumption of sphericity, and in cases where the assumption was violated, the Greenhouse–Geisser correction was applied. Post-hoc comparisons were conducted using Bonferroni adjustment to identify significant differences between time points. Effect sizes were calculated using partial eta squared (η^2) to determine the magnitude of the intervention effects. Statistical significance was set at $p < 0.05$ for all analyses.

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3. Findings and Results

At the descriptive level, the demographic characteristics of the participants indicated that the sample consisted of 40 individuals (n = 40) with depressive symptoms who were randomly assigned to experimental (n = 20) and control (n = 20) groups. The mean age of participants in the experimental group was 32.45 years (SD = 6.18), while in the control group it was 31.90 years (SD = 5.74), indicating comparable age distribution across groups. In terms of gender distribution, 55% of the participants were female and 45% were male, with a relatively balanced representation in both groups. Regarding educational level, the majority of participants held at least a bachelor's degree (62.50%), followed by diploma (22.50%) and postgraduate degrees (15.00%). Marital status distribution showed that 57.50% were married and 42.50% were single. Overall, the demographic variables did not show substantial differences between the two groups, suggesting baseline equivalence prior to the intervention.

Table 1

Descriptive Statistics (Mean and Standard Deviation) of Research Variables Across Measurement Stages in Experimental and Control Groups

Variable	Group	Pre-test Mean (SD)	Post-test Mean (SD)	Follow-up Mean (SD)
Early Maladaptive Schemas	Experimental	256.38 (18.74)	198.65 (16.29)	201.12 (15.83)
	Control	253.91 (19.11)	249.77 (18.58)	251.06 (18.96)
Dysfunctional Beliefs	Experimental	172.54 (14.22)	129.68 (12.47)	131.25 (12.88)
	Control	170.88 (15.01)	168.43 (14.66)	169.91 (14.83)
Depression	Experimental	31.76 (6.84)	17.42 (5.63)	18.15 (5.91)
	Control	30.95 (7.12)	29.81 (6.97)	30.44 (7.05)

The descriptive statistics presented in Table 1 indicate that at the pre-test stage, the mean scores of early maladaptive schemas, dysfunctional beliefs, and depression were relatively similar between the experimental and control groups, suggesting initial homogeneity. Following the intervention, the experimental group demonstrated a marked reduction in all three variables, with early maladaptive schemas decreasing from a mean of 256.38 to 198.65 at post-test and remaining relatively stable at follow-up (201.12). Similarly, dysfunctional beliefs declined substantially from 172.54 at pre-test to 129.68 at post-test, with minimal increase at follow-up (131.25), indicating sustained improvement. Depression scores also showed a considerable decrease from 31.76 to 17.42 at post-test, with slight maintenance at follow-up (18.15). In contrast, the control group exhibited only negligible changes across all variables over time, with means remaining relatively stable from pre-test to follow-up. These patterns suggest that the observed improvements in the experimental group are likely attributable to the intervention rather than external factors.

Table 2

Results of Repeated Measures ANOVA for Early Maladaptive Schemas, Dysfunctional Beliefs, and Depression

Variable	Source	SS	df	MS	F	p	η^2
Early Maladaptive Schemas	Time	18254.73	2	9127.36	46.82	0.001	0.55
	Group	12488.51	1	12488.51	38.67	0.001	0.50
	Time × Group	15672.94	2	7836.47	41.29	0.001	0.52
Dysfunctional Beliefs	Time	13982.66	2	6991.33	52.14	0.001	0.58
	Group	10456.23	1	10456.23	36.91	0.001	0.49
	Time × Group	12175.84	2	6087.92	44.37	0.001	0.54
Depression	Time	3284.57	2	1642.28	48.76	0.001	0.56
	Group	2417.39	1	2417.39	35.28	0.001	0.48
	Time × Group	2896.44	2	1448.22	42.65	0.001	0.53

The results of the repeated measures ANOVA presented in Table 2 demonstrate statistically significant effects for time, group, and the interaction between time and group across all three dependent variables. For early maladaptive schemas, the significant time effect ($F = 46.82$, $p < 0.001$, $\eta^2 = 0.55$) indicates changes across measurement points, while

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the significant group effect ($F = 38.67$, $p < 0.001$, $\eta^2 = 0.50$) reflects overall differences between experimental and control groups. Importantly, the significant interaction effect ($F = 41.29$, $p < 0.001$, $\eta^2 = 0.52$) suggests that the pattern of change over time differed significantly between groups, confirming the effectiveness of the intervention. Similar patterns were observed for dysfunctional beliefs and depression, with all F-values indicating strong statistical significance ($p < 0.001$) and large effect sizes (η^2 ranging from 0.48 to 0.58). These findings collectively indicate that the attachment-based cognitive integrative therapy had a substantial and statistically significant impact on reducing maladaptive schemas, dysfunctional beliefs, and depressive symptoms over time compared to the control condition.

Table 3

Bonferroni Post-hoc Test Results for Pairwise Comparisons Across Measurement Stages (Experimental Group)

Variable	Comparison	Mean Difference	Std. Error	p-value
Early Maladaptive Schemas	Pre-test vs Post-test	57.73	6.18	0.001
	Pre-test vs Follow-up	55.26	6.42	0.001
	Post-test vs Follow-up	-2.47	3.11	0.428
Dysfunctional Beliefs	Pre-test vs Post-test	42.86	5.34	0.001
	Pre-test vs Follow-up	41.29	5.58	0.001
	Post-test vs Follow-up	-1.57	2.74	0.563
Depression	Pre-test vs Post-test	14.34	2.17	0.001
	Pre-test vs Follow-up	13.61	2.25	0.001
	Post-test vs Follow-up	-0.73	1.19	0.612

The Bonferroni post-hoc test results in Table 3 provide further clarification of the specific differences between measurement stages within the experimental group. For all three variables, the comparisons between pre-test and post-test, as well as pre-test and follow-up, were statistically significant ($p < 0.001$), indicating substantial reductions following the intervention that were maintained over time. In contrast, the comparisons between post-test and follow-up were not statistically significant ($p > 0.05$), suggesting stability of treatment effects without significant relapse or deterioration. For example, early maladaptive schemas showed a significant reduction of 57.73 points from pre-test to post-test and 55.26 points from pre-test to follow-up, while the negligible difference between post-test and follow-up (-2.47) indicates maintenance of therapeutic gains. Similar patterns were observed for dysfunctional beliefs and depression, further supporting the durability and effectiveness of the intervention. Overall, these results confirm that the observed improvements occurred primarily between pre-test and post-test and were sustained at follow-up, highlighting the long-term impact of the therapeutic program.

4. Discussion and Conclusion

The findings of the present study demonstrated that attachment-based cognitive integrative therapy produced a statistically significant reduction in early maladaptive schemas, dysfunctional beliefs, and depressive symptoms in the experimental group compared to the control group, with these effects remaining stable at the follow-up stage. The descriptive results indicated that participants in the experimental group experienced substantial decreases in schema activation, rigid cognitive attitudes, and depressive severity from pre-test to post-test, whereas the control group showed minimal fluctuations across all variables. Furthermore, the results of repeated measures analysis of variance confirmed significant effects of time, group, and the interaction between time and group for all dependent variables, indicating that the observed improvements were attributable to the intervention rather than to natural recovery or external factors. The Bonferroni post-hoc comparisons further revealed that the most significant changes occurred between pre-test and post-test, with no significant differences between post-test and follow-up, suggesting that the therapeutic gains were maintained over time without relapse.

These findings can be interpreted within the framework of integrative therapeutic models, which emphasize the interaction between cognitive processes and attachment-related mechanisms in the development and maintenance of depression. The significant reduction in early maladaptive schemas suggests that the intervention was successful in targeting deeply rooted cognitive-emotional structures that originate from adverse developmental experiences. This is consistent with theoretical perspectives that conceptualize

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schemas as enduring patterns that shape perception and emotional responses, and empirical evidence indicating that modifying these schemas leads to substantial psychological improvement (Akers et al., 2025; Zarei et al., 2024). The present results align with studies demonstrating that schema-focused and integrative therapies can effectively reduce maladaptive schemas and associated distress, thereby supporting the efficacy of interventions that extend beyond surface-level cognitive restructuring (Asadi et al., 2025; Ghanavati, 2024).

The observed reduction in dysfunctional beliefs further supports the effectiveness of the intervention in modifying maladaptive cognitive patterns. Dysfunctional beliefs, such as perfectionistic standards, dependency, and negative self-evaluation, are central components of depressive cognition and are often maintained through cognitive biases and reinforcement mechanisms. The significant improvement in these beliefs in the experimental group is consistent with previous research demonstrating that cognitive-behavioral interventions can effectively reduce dysfunctional attitudes and improve cognitive flexibility (Salmani et al., 2019; Thakral et al., 2020). However, the magnitude and دوام (persistence) of change observed in the present study may be attributed to the integration of attachment-based components, which likely facilitated deeper restructuring of cognitive patterns by addressing their developmental origins. This interpretation is supported by evidence suggesting that cognitive changes are more sustainable when they are linked to underlying emotional and relational processes (Egli et al., 2024; Walter et al., 2024).

In addition, the significant decrease in depressive symptoms observed in the experimental group highlights the clinical relevance of the intervention. Depression is strongly associated with maladaptive schemas and dysfunctional beliefs, and changes in these cognitive structures are often accompanied by improvements in mood and functioning. The findings of the present study are consistent with longitudinal research demonstrating that dysfunctional attitudes and cognitive vulnerabilities are key predictors of depressive symptoms over time (Strand et al., 2024). By targeting both schemas and beliefs, the intervention appears to have disrupted the cognitive processes that sustain depression, leading to meaningful symptom reduction. Moreover, the maintenance of these improvements at follow-up suggests that the intervention not only alleviated symptoms but also enhanced resilience against future relapse.

The role of attachment processes in these outcomes warrants particular attention. Attachment theory posits that early interactions with caregivers shape internal working models that influence emotional regulation, interpersonal relationships, and vulnerability to psychopathology. Insecure attachment patterns have been consistently linked to higher levels of depression, maladaptive schemas, and dysfunctional beliefs (Çelikbaş & Yalçınkaya-Alkar, 2022; Kashani Vahid et al., 2024). The integration of attachment-based techniques in the present intervention likely contributed to the modification of these internal working models, thereby facilitating changes in both emotional and cognitive domains. This interpretation is supported by studies showing that attachment-based interventions can significantly improve emotional regulation and reduce depressive symptoms by fostering secure relational patterns and adaptive coping strategies (Seyed Mousavi et al., 2024; Tay-Karapas et al., 2024).

Furthermore, the findings are consistent with research comparing the effectiveness of different therapeutic approaches. Studies have shown that integrative therapies combining cognitive and emotional components yield greater improvements in psychological outcomes than single-modality interventions. For example, comparative studies have demonstrated that combining cognitive-behavioral techniques with schema-focused or emotion-based approaches leads to enhanced cognitive regulation and reduced anxiety and depression (Haghiri et al., 2025; Jafari Goloche et al., 2024). Similarly, attachment-based family and play therapies have been found to improve emotional regulation and quality of life, further supporting the value of incorporating relational elements into therapeutic interventions (Ghanavati et al., 2024; Shamsabadi et al., 2024). The present study extends these findings by demonstrating that an integrative approach can simultaneously target multiple cognitive and emotional processes, resulting in comprehensive therapeutic benefits.

Another important aspect of the findings is the stability of treatment effects over time. The absence of significant differences between post-test and follow-up suggests that the intervention produced enduring changes in cognitive and emotional functioning. This is particularly relevant given the chronic and recurrent nature of depression, which often involves relapse after initial improvement. The durability of treatment effects observed in this study may be attributed to the combined focus on cognitive restructuring, schema modification, and attachment-based emotional processing, which together enhance long-term psychological resilience.

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Previous research has highlighted the importance of addressing both cognitive and emotional mechanisms to achieve sustained therapeutic outcomes, and the present findings provide empirical support for this integrative approach (Egli et al., 2024; Wittkowski et al., 2024).

In addition, the results can be interpreted in light of metacognitive and interpersonal perspectives. Dysfunctional beliefs and schemas are often maintained by maladaptive metacognitive processes and interpersonal dynamics, which reinforce negative thinking patterns and emotional distress. Interventions that incorporate interpersonal and metacognitive elements have been shown to improve communication patterns, reduce cognitive distortions, and enhance psychological well-being (Montajabian & Rezai Dehnavi, 2021). The inclusion of attachment-based components in the present intervention may have facilitated similar processes by promoting emotional awareness, improving interpersonal functioning, and reducing reliance on maladaptive cognitive strategies. This integrative mechanism likely contributed to the observed improvements across all outcome variables.

Overall, the findings of the present study provide strong support for the effectiveness of attachment-based cognitive integrative therapy in reducing early maladaptive schemas, dysfunctional beliefs, and depression. By addressing both the cognitive and relational dimensions of psychological functioning, the intervention appears to offer a comprehensive and effective approach to the treatment of depression. These results contribute to the growing body of literature emphasizing the importance of integrative therapeutic models and highlight the potential benefits of combining cognitive and attachment-based approaches in clinical practice.

One of the main limitations of the present study is the relatively small sample size, which may limit the generalizability of the findings to broader populations. In addition, the use of purposive sampling and the focus on individuals from counseling centers in Tehran may restrict the external validity of the results. Another limitation is the reliance on self-report measures, which are subject to response biases such as social desirability and inaccurate self-assessment. Furthermore, the follow-up period was relatively short, and longer-term follow-up assessments would be necessary to determine the durability of treatment effects over extended periods. Finally, the absence of an active comparison group limits the ability to determine the relative effectiveness of the intervention compared to other established treatments.

Future research should aim to replicate these findings using larger and more diverse samples to enhance generalizability. Studies employing randomized controlled trial designs with active comparison groups would provide more robust evidence regarding the relative efficacy of attachment-based cognitive integrative therapy. In addition, future studies could examine the mediating and moderating mechanisms underlying treatment effects, such as changes in emotion regulation, attachment security, and metacognitive processes. Longitudinal research with extended follow-up periods is also recommended to assess the long-term stability of therapeutic outcomes. Moreover, investigating the applicability of this integrative approach across different clinical populations and cultural contexts would further contribute to the development of evidence-based interventions.

From a practical perspective, the findings of this study suggest that incorporating attachment-based components into cognitive-behavioral interventions may enhance their effectiveness in treating depression and related cognitive vulnerabilities. Clinicians are encouraged to adopt integrative approaches that address both cognitive distortions and underlying relational patterns, thereby providing more comprehensive and individualized treatment. Training programs for mental health professionals should emphasize the importance of understanding attachment processes and their interaction with cognitive mechanisms in the development of psychopathology. In addition, the development of structured treatment protocols and manuals for attachment-based cognitive integrative therapy could facilitate its implementation in clinical settings. Finally, policymakers and healthcare providers should consider supporting the integration of such approaches into mental health services to improve treatment outcomes and promote psychological well-being.

Authors' Contributions

All authors significantly contributed to this study.

Declaration

In order to correct and improve the academic writing of our paper, we have used the language model ChatGPT.

Transparency Statement

Data are available for research purposes upon reasonable request to the corresponding author.

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Declaration of Interest

The authors report no conflict of interest.

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Ethical Considerations

In this study, to observe ethical considerations, participants were informed about the goals and importance of the research before the start of the study and participated in the research with informed consent.

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