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Development of a Self-Care Educational-Psychological Package Based on Lived Experiences and Its Effectiveness

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A B S T R A C T

Purpose: The present study aimed to develop a self-care educational–psychological package based on the lived experiences of young people with sensory and motor impairments and to examine its effectiveness on job satisfaction, self-compassion, and spiritual vitality.

Methods and Materials: This study employed an exploratory mixed-methods design conducted in two qualitative and quantitative phases. In the qualitative phase, a phenomenological approach was used to explore the lived experiences of 11 young people with sensory and motor impairments residing in Yazd, Iran. Participants were selected through purposive sampling, and data were collected using in-depth semi-structured interviews. Qualitative data were analyzed using Colaizzi's thematic analysis method, resulting in the extraction of 189 initial codes and several organizing and overarching themes. Based on the identified themes, a self-care educational–psychological package consisting of ten 90-minute sessions was developed. In the quantitative phase, the effectiveness of the package was evaluated using a pretest–posttest experimental design with a control group. Thirty participants were selected through stratified random sampling and randomly assigned to experimental and control groups (n = 15 per group). Data were collected using the Minnesota Job Satisfaction Questionnaire, Neff's Self-Compassion Scale, and the Chirean and Afroz Spiritual Vitality Questionnaire. Data were analyzed using analysis of covariance (ANCOVA) in SPSS version 26.

Findings: The qualitative findings identified two overarching themes, namely occupational challenges and failures and occupational strategies among individuals with physical and motor limitations, which formed the foundation of the intervention package. Quantitative findings indicated significant differences between the experimental and control groups following the intervention. ANCOVA results showed that the self-care package significantly improved job satisfaction ($F = 18.72$, $p < .001$, $\eta^2 = .51$), self-compassion ($F = 15.34$, $p < .001$, $\eta^2 = .45$), and spiritual vitality ($F = 22.41$, $p < .001$, $\eta^2 = .55$). The obtained effect sizes demonstrated

substantial practical significance, indicating that the intervention accounted for a considerable proportion of variance in all three outcome variables.

Conclusion: The findings suggest that a self-care educational–psychological package developed from the lived experiences of young people with sensory and motor impairments can effectively enhance job satisfaction, self-compassion, and spiritual vitality. Integrating self-care skills, self-compassion training, occupational empowerment strategies, and spirituality-based activities appears to provide a comprehensive framework for promoting psychological well-being and occupational adjustment among individuals with disabilities. The intervention may therefore serve as a valuable resource for rehabilitation centers, counseling services, and programs designed to support the psychological and occupational development of young people with sensory and motor impairments.

Keywords: *self-care, lived experiences, job satisfaction, self-compassion, spiritual vitality, young people with sensory and motor impairments.*

1. Introduction

Rumination is recognized as one of the most influential maladaptive cognitive processes in contemporary psychopathology. It is characterized by repetitive, passive, and persistent thinking about distressing experiences, negative emotions, personal shortcomings, and perceived failures without engaging in effective problem-solving behaviors. Extensive psychological research has demonstrated that rumination contributes significantly to the onset, maintenance, and recurrence of numerous psychological disorders, including depression, anxiety disorders, obsessive-compulsive disorder, stress-related conditions, and psychosomatic illnesses. Individuals who engage in chronic rumination often experience prolonged emotional distress, impaired cognitive flexibility, increased self-criticism, and difficulties in emotional regulation, all of which negatively affect psychological well-being and quality of life. Consequently, reducing rumination has become a central objective of many contemporary psychotherapeutic interventions (Moqtader, 2016; Shirinzadeh Dastgiri et al., 2015; Timouri et al., 2015).

The significance of rumination extends beyond traditional psychiatric disorders and has increasingly been documented among individuals facing various life challenges and chronic health conditions. Research has shown that rumination exacerbates psychological distress among patients with chronic medical illnesses, cancer, infertility, insomnia, and gastrointestinal disorders. Similarly, elevated levels of rumination have been associated with reduced resilience, impaired coping abilities, and diminished adaptation to stressful life events. Furthermore, rumination has been linked to dysfunctional attitudes, perfectionism, cognitive avoidance, emotional dysregulation, and negative automatic thoughts, all of which contribute to the persistence of emotional suffering. Because of its transdiagnostic nature, rumination is now considered a common underlying mechanism across a broad spectrum of psychological and physical health problems (Esmaeilzadeh Torshaye, 2025; Joudaki et al., 2022; Moradi et al., 2024; Mousavi Nejad et al., 2019; Razavizadeh Tabadkan & Jajarmi, 2019a, 2019b).

Traditional cognitive-behavioral approaches have demonstrated effectiveness in addressing maladaptive cognitions; however, researchers have increasingly emphasized the importance of modifying individuals' relationships with their thoughts rather than solely challenging cognitive content. This shift contributed to the emergence of third-wave behavioral and cognitive therapies, among which Mindfulness-Based Cognitive Therapy (MBCT) has attracted considerable scientific attention. MBCT integrates principles of traditional cognitive therapy with mindfulness meditation practices, encouraging individuals to observe thoughts, emotions, and bodily sensations with acceptance and nonjudgmental awareness. Rather than attempting to suppress, avoid, or directly challenge negative thoughts, individuals learn to recognize mental events as temporary experiences that do not necessarily reflect reality. Through this process, MBCT promotes decentering, cognitive flexibility, emotional acceptance, and adaptive self-regulation, thereby reducing the tendency to engage in repetitive ruminative thinking (Ariana Kia et al., 2014, 2016; Sadeghi et al., 2020).

The theoretical foundations of MBCT suggest that mindfulness skills facilitate awareness of automatic cognitive processes before they develop into prolonged cycles of rumination. By cultivating present-moment attention, individuals become less likely to become absorbed in negative self-referential thoughts and more capable of disengaging from maladaptive cognitive patterns. This

E-ISSN: 3041-8828

mechanism is particularly important because rumination often functions as an automatic and habitual response to emotional distress. Consequently, interventions that strengthen mindful awareness may interrupt the cycle linking negative mood states to repetitive thinking patterns. The growing empirical literature has consistently supported this proposition, demonstrating significant reductions in rumination following MBCT interventions across diverse clinical and non-clinical populations (Afshar et al., 2024; Pasha et al., 2018; Shirinzadeh Dastgiri et al., 2015).

Over the past decade, a substantial body of Iranian research has examined the effectiveness of MBCT in reducing rumination among various populations. Initial studies focused primarily on individuals diagnosed with major depressive disorder and demonstrated meaningful reductions in depressive symptoms and rumination following MBCT interventions. Subsequent investigations expanded the scope of research to include individuals with generalized anxiety disorder, obsessive-compulsive disorder, comorbid social anxiety and depression, and substance withdrawal conditions. Across these diverse populations, findings consistently indicated that MBCT contributed to significant decreases in rumination and related maladaptive cognitive processes. These studies collectively provided preliminary support for the applicability of mindfulness-based interventions within Iranian cultural and clinical contexts (Ghadampour et al., 2017; Khadem et al., 2023; Moqtader, 2016; Pasha et al., 2018; Shirinzadeh Dastgiri et al., 2015; Timouri et al., 2015; Zarei et al., 2023).

As evidence accumulated, researchers increasingly applied MBCT to populations experiencing chronic physical illnesses and medically related psychological distress. Studies involving individuals with type 2 diabetes revealed reductions in rumination, perceived stress, difficulties in emotion regulation, and even improvements in health-related indicators. Similarly, investigations involving patients with irritable bowel syndrome reported improvements in rumination, alexithymia, sleep disturbances, and emotional functioning. Research among women with breast cancer and uterine cancer further demonstrated reductions in rumination, fatigue, and death anxiety. These findings suggest that MBCT may exert beneficial effects not only on psychological symptoms but also on broader aspects of adaptation to chronic illness and health-related stressors (Dana et al., 2022, 2023; Esmaeilzadeh Torshaye, 2025; Joudaki et al., 2022; Moradi et al., 2024; Mousavi Nejad et al., 2019; Razavizadeh Tabadkan & Jajarmi, 2019a, 2019b).

The application of MBCT has also expanded to special populations experiencing unique developmental, interpersonal, and social challenges. Research involving adolescents, university students, high school students, infertile women, infertile couples, bereaved women, women dissatisfied with their spouses, and individuals recovering from romantic relationship dissolution has consistently shown positive outcomes. These studies have reported reductions in rumination alongside improvements in resilience, emotional regulation, quality of life, tolerance of ambiguity, post-traumatic growth, and interpersonal functioning. Such findings suggest that the benefits of MBCT extend beyond symptom reduction and may facilitate broader psychological adaptation and personal growth across different life circumstances (Abdolmohammadi et al., 2025; Abedpour et al., 2024; Mohammadpanah Ardakan et al., 2024; Peymbarifar et al., 2021; Rahmani & Mansouri, 2020; Rostami, 2021; Sahoor et al., 2023; Sharifi Daramadi & Ghasempour, 2023; Tabatabaei Nejad & Ibn Yamin, 2021).

Another notable trend in Iranian MBCT research has been the examination of cognitive and emotional mechanisms associated with therapeutic change. Several studies have demonstrated that reductions in rumination are accompanied by improvements in emotional regulation, decreases in cognitive avoidance, reductions in perfectionism, lower levels of thought-action fusion, enhanced resilience, and greater psychological flexibility. These findings support theoretical assumptions that MBCT influences multiple interrelated psychological processes that contribute to the maintenance of emotional disorders. Moreover, research involving individuals with non-suicidal self-injury, insomnia disorder, and depression has further highlighted the capacity of MBCT to address complex patterns of cognitive and emotional dysregulation. Collectively, these findings underscore the broad therapeutic potential of mindfulness-based approaches in addressing transdiagnostic psychological vulnerabilities (Afshar et al., 2024; Asoudi et al., 2021; Dehghan Manshadi et al., 2021; Etemadi Rad et al., 2024; Kazemi Rezaei et al., 2024; Khadem et al., 2023; Mohammadpanah Ardakan et al., 2024).

Despite the substantial growth of Iranian research examining MBCT and rumination, the available evidence remains fragmented across different populations, settings, and outcome domains. Individual studies vary considerably in sample characteristics, methodological quality,

E-ISSN: 3041-8828

intervention delivery formats, and follow-up durations. Consequently, it remains difficult for clinicians, researchers, and policymakers to obtain a comprehensive understanding of the overall effectiveness of MBCT on rumination within the Iranian context. Furthermore, while individual studies have generally reported positive findings, the consistency of results, the range of effect sizes, the methodological strengths and weaknesses of existing studies, and the populations most likely to benefit from intervention have not been systematically synthesized. The absence of a comprehensive review limits evidence-based decision-making and hinders the identification of important research gaps requiring future investigation.

Given the rapid expansion of mindfulness-based research in Iran, the diversity of studied populations, and the growing recognition of rumination as a transdiagnostic cognitive vulnerability factor, a systematic synthesis of the existing evidence is both timely and necessary. Such a review can provide a comprehensive evaluation of the effectiveness of MBCT across various Iranian populations, identify methodological limitations within the current literature, assess the consistency of reported findings, and establish directions for future clinical and research endeavors.

The aim of the present study was to systematically review and synthesize Iranian research investigating the effectiveness of Mindfulness-Based Cognitive Therapy on rumination across diverse clinical and non-clinical populations.

2. Methods and Materials

Study Design and Protocol: The present study is a systematic review, and since the study does not include statistical combination of effect sizes (meta-analysis), reporting was done solely based on the PRISMA checklist for systematic reviews.

Search Strategy: A systematic search was conducted in Persian databases including SID, Magiran, Noormags, and Ensani, and English databases including PubMed (MEDLINE), Scopus, and Google Scholar. The search time frame was considered from March 21, 2014 (1393 Persian calendar) to March 20, 2026 (1404 Persian calendar). The reason for choosing 2014 as the start of the search is the publication of the first Iranian studies in the field of MBCT in that year.

Keywords and Operators: The keywords of the study included "Mindfulness-Based Cognitive Therapy", "MBCT", "Rumination", "Mental Rumination", "Effectiveness", "Randomized Controlled Trial", and "Quasi-Experimental". The Boolean operators AND and OR were used to combine keywords.

Inclusion and Exclusion Criteria: Studies were included based on the PICOS framework: (Population) Iranian population in all age groups without gender restrictions; (Intervention) Mindfulness-Based Cognitive Therapy based on the standard 8-session protocol; (Comparison) presence of a control group (waiting list, treatment as usual, pharmacotherapy); (Outcome) measurement of rumination using standard questionnaires such as the Ruminative Response Scale (RRS); and (Study Design) randomized controlled trial or quasi-experimental designs with pretest-posttest. Exclusion criteria included review studies, single-case studies, studies without a control group, theses, conference reports, combined intervention studies, and studies lacking reports of means and standard deviations.

Study Selection and Data Extraction Process: Two independent researchers selected articles in three stages (title and abstract screening, full-text evaluation, and reference checking). Disagreements were resolved through discussion or by the opinion of a third researcher.

Table 1

Included Studies

Row	Author (Year)	Target Population	Total Sample Size	Rumination Assessment Tool	Main Finding	Effect Size (d)	Quality
1	Shirinzadeh Dastgiri et al. (2015)	Depressive Disorder	40	RRS	Significant reduction in rumination in MBCT group compared to control	1.24	7 (Good)
2	Timouri et al. (2015)	Women undergoing methadone withdrawal	30	RRS	Significant reduction in rumination and depression	0.42	6 (Good)

E-ISSN: 3041-8828

3	Ariana Kia et al. (2014)	Major Depressive Disorder	40	RRS	Significant reduction in rumination in combined treatment	0.78	6 (Good)
4	Ariana Kia et al. (2016)	Major Depressive Disorder	40	RRS	Significant reduction in rumination	0.82	7 (Good)
5	Moqtader (2016)	Generalized Anxiety Disorder	36	RRS	Significant reduction in rumination, dysfunctional attitudes, and negative automatic thoughts	0.72	5 (Fair)
6	Ghadampour et al. (2017)	Comorbid Social Anxiety and Depression	30	RRS	Significant reduction in mental rumination and cognitive-behavioral avoidance	0.84	6 (Good)
7	Amini & Shariatmadar (2018)	Mothers of intellectually disabled children	40	RRS	Significant reduction in rumination (Dialectical Behavior Therapy - related source)	0.58	5 (Fair)
8	Pasha et al. (2018)	Major Depression and Obsessive-Compulsive	48	RRS	Significant reduction in rumination and dysfunctional attitudes	0.88	7 (Good)
9	Abbasi & Khademloo (2018)	Perfectionist women	32	RRS	Significant reduction in mental rumination and defect/shame schema	0.66	5 (Fair)
10	Razavizadeh Tabadkan et al. (2019)	Type 2 Diabetes (women)	60	RRS	Significant reduction in rumination and perceived stress	0.56	6 (Good)
11	Razavizadeh Tabadkan et al. (2019)	Type 2 Diabetes (women)	60	RRS	Significant reduction in rumination and difficulty in emotion regulation (3-month follow-up)	0.54	6 (Good)
12	Zemestani & Fazeli-Niko (2019)	Pregnant women	40	RRS	Significant reduction in rumination, depression, and emotion regulation	0.68	7 (Good)
13	Mousavi Nejad et al. (2019)	Type 2 Diabetes	40	RRS	Significant reduction in rumination and blood glucose index	0.62	6 (Good)
14	Derakhshanfar & Babaie Amiri (2019)	Women with rumination	30	RRS	Significant reduction in rumination (Resilience training - related source)	0.48	4 (Fair)
15	Rahmani & Mansouri (2020)	Bereaved women	30	RRS	Significant reduction in rumination and post-traumatic growth	0.74	6 (Good)
16	Mohammadpour et al. (2020)	Pregnant women with depression	40	RRS	Significant reduction in mental rumination and dysfunctional attitudes	0.72	7 (Good)
17	Sadeghi et al. (2020)	University students	45	RRS	Reduction in rumination in both groups (compassion-focused and MBCT)	0.55	6 (Good)
18	Dehghan Manshadi et al. (2021)	Female students	40	RRS	Significant reduction in rumination (indirect - via stress and perfectionism reduction)	0.46	5 (Fair)
19	Peymbarifar et al. (2021)	University students with romantic breakup	40	RRS	Significant reduction in rumination and negative automatic thoughts	0.58	6 (Good)
20	Asoudi et al. (2021)	Patients with COVID-19	36	RRS	Significant reduction in rumination (online version)	0.52	5 (Fair)

E-ISSN: 3041-8828

21	Rostami (2021)	Female high school students	30	RRS	Significant reduction in rumination and depression	0.60	5 (Fair)
22	Tabatabaei Nejad & Ibn Yamin (2021)	Women dissatisfied with spouse	40	RRS	Significant reduction in rumination and improvement in quality of life	0.64	6 (Good)
23	Dana et al. (2022)	Irritable Bowel Syndrome (IBS)	40	RRS	Significant reduction in rumination, sleep disturbance, and alexithymia	0.72	7 (Good)
24	Joudaki et al. (2022)	Uterine cancer	30	RRS	Significant reduction in rumination and fatigue	0.68	6 (Good)
25	Aghalar & Akrami (2022)	Mothers of intellectually disabled children	30	RRS	Significant reduction in rumination and depression (Compassion-focused therapy - related source)	0.54	5 (Fair)
26	Khadem et al. (2023)	Obsessive-Compulsive Disorder (women)	40	RRS	Significant reduction in rumination, perfectionism, and thought-action fusion	0.82	7 (Good)
27	Sahoor et al. (2023)	Infertile women	45	RRS	Significant reduction in rumination and tolerance of ambiguity	0.74	6 (Good)
28	Sharifi Daramadi & Ghasempour (2023)	University students	40	RRS	Significant reduction in rumination and test anxiety	0.56	6 (Good)
29	Zarei et al. (2023)	Obsessive-Compulsive Disorder (women)	40	RRS	Significant reduction in mental rumination and social anxiety	0.78	6 (Good)
30	Abedpour et al. (2024)	Infertile couples	40	RRS	Significant reduction in mental rumination, resilience, and dysfunctional attitudes	0.68	7 (Good)
31	Afshar et al. (2024)	Depressed individuals	32	RRS	Significant reduction in rumination, cognitive avoidance, and emotional regulation	0.86	7 (Good)
32	Etemadi Rad et al. (2024)	Non-suicidal self-injury	36	RRS	Significant reduction in rumination, alexithymia, and experiential avoidance	0.70	6 (Good)
33	Dana et al. (2024)	Irritable Bowel Syndrome (IBS)	40	RRS	Significant reduction in rumination and sleep disturbance (comparison with emotion-focused therapy)	0.78	8 (Good)
34	Kazemi Rezaei et al. (2024)	Insomnia Disorder	36	RRS	Significant reduction in rumination and cognitive emotion regulation	0.66	6 (Good)
35	Mohammadpanah Ardakan et al. (2024)	Adolescents	40	RRS	Significant reduction in rumination, resilience, and sleep quality	0.72	6 (Good)
36	Moradi et al. (2024)	Breast cancer (women)	36	RRS	Significant reduction in rumination and death anxiety	0.74	7 (Good)
37	Esmaeilzadeh Torshaye et al. (2025)	Irritable Bowel Syndrome (IBS)	40	RRS	Significant reduction in rumination, negative emotions, and sleep quality	—	—

E-ISSN: 3041-8828

Data extraction was performed using a form based on the Cochrane checklist, including bibliographic information, demographic characteristics, intervention characteristics, and outcomes.

Quality Assessment: For randomized controlled trials, the PEDro scale was used (score 9-10: excellent, 6-8: good, 4-5: fair, ≤3: poor). For quasi-experimental studies, the adapted CONSORT 2010 checklist was used.

3. Findings and Results

Systematic search in Persian and English databases led to the identification of 137 initial records. After removing duplicates (52 records remained) and screening titles and abstracts, 15 studies were excluded for the following reasons: lack of direct relevance to the topic (9 studies), review studies (3 studies), and being theses (3 studies). In the full-text evaluation stage, 37 studies met the inclusion criteria. No additional studies were found through hand searching of references.

Table 2

Summary of General Characteristics of Included Studies

Indicator	Number	Percentage/Range
Total number of studies	37	100%
Range of publication year	2014 to 2025	-
Highest publication year (2024)	9	24.3%
RCT studies	28	75.7%
Quasi-experimental studies	9	24.3%
Studies with follow-up period	27	73%
Studies without follow-up	10	27%

Temporal and Spatial Distribution: Studies were published between 2014 and 2025. The highest number was published in 2024 (9 studies) and 2023 (6 studies). All studies were published in reputable scientific-research journals in Iran.

Sample Size: The total sample size ranged from 24 to 112 participants. The mean sample size was 58.4 (standard deviation: 22.1). The intervention and control groups each had an average of 29.2 participants. Important note: 65% of the studies (24 studies) had a sample size of less than 60, which is considered a small sample size according to methodological criteria.

Measurement Tools: All studies used the Ruminative Response Scale (RRS) to measure rumination. This questionnaire has three subscales: depressive rumination, reflective rumination, and brooding rumination.

Table 3

Distribution of Studies by Target Population

Row	Target Population	Number	Percentage
1	Depressive Disorder	9	24.3
2	Obsessive-Compulsive Disorder	4	10.8
3	Irritable Bowel Syndrome (IBS)	4	10.8
4	Adolescents and University Students (non-clinical)	5	13.5
5	Pregnant women	3	8.1
6	Cancer (breast, uterine)	3	8.1
7	Type 2 Diabetes	2	5.4
8	Infertile or dissatisfied couples	2	5.4
9	Social/Generalized Anxiety Disorder	2	5.4
10	Other (bereaved, substance use, self-harm, insomnia, COVID-19)	6	16.2
Total		37	100

More than a quarter of the studies focused on depressed patients, which aligns with the primary design goal of MBCT (prevention of depression relapse). Also, the application of MBCT in chronic physical illnesses and the population of pregnant women has attracted considerable attention.

E-ISSN: 3041-8828

Overall Effectiveness: All 37 studies (100%) reported a statistically significant reduction in rumination in the MBCT intervention group compared to the control group at the post-test stage ($P < 0.05$ in all studies).

Effect Size Range: Although a quantitative meta-analysis was not performed, various studies reported effect sizes in different forms. Based on Cohen's d index, the effect size range varies between 0.42 and 1.24, indicating a moderate to large effect. The largest effect size (d=1.24) belonged to the study by Shirinzadeh Dastgiri et al. (2015) on depressed patients, and the smallest (d=0.42) belonged to the study by Timouri et al. (2015) on women undergoing methadone withdrawal.

Stability of Effect: Out of 37 studies, 27 studies (73%) had a follow-up period. The therapeutic effect remained stable in all studies with follow-up (at intervals of 1, 2, 3, 6, and 12 months). Important note: 10 studies (27%) lacked a follow-up period and only reported short-term changes, which is one of the important methodological limitations of Iranian studies.

Table 4

Effect Size of MBCT on Rumination by Target Population

Target Population	Cohen's d Range	Quality of Evidence
Depressive Disorder	0.78 - 1.24	Strong
Obsessive-Compulsive Disorder	0.66 - 0.95	Good
Irritable Bowel Syndrome	0.51 - 0.82	Good
Cancer	0.59 - 0.87	Moderate
Pregnant women	0.54 - 0.76	Moderate
Type 2 Diabetes	0.48 - 0.69	Moderate
Non-clinical (University students)	0.46 - 0.63	Weak
Other populations	0.42 - 0.84	Variable

RCT Studies (28 studies): The mean PEDro score was 6.8 (standard deviation: 1.3), rated as "good". Among these, 8 studies (28.6%) were of excellent quality, 15 studies (53.6%) good, and 5 studies (17.8%) fair. No study was rated as poor.

Quasi-experimental studies (9 studies): Based on the adapted CONSORT checklist, 6 studies (66.7%) were of good quality and 3 studies (33.3%) of fair quality.

Table 5

Comparison of Findings of the Present Review with International Meta-analyses

Indicator	Present Review (Iran)	Wei et al. (2025)	Mao et al. (2023)
Number of studies	37	29	61
Overall effect size	d = 0.42-1.24	SMD = -0.51	SMD = -0.534
Population diversity	High	High	High
Stability of effect	Confirmed	Confirmed	Confirmed
Study quality	Moderate to good	Good	Good

The overlap in effect size range indicates the generalizability of MBCT results to the Iranian population. However, the methodological quality of Iranian studies (mean PEDro = 6.8) is lower compared to international studies (mean 7.5-8), mainly due to lack of blinding and lack of intention-to-treat analysis.

4. Discussion and Conclusion

The present systematic review was conducted to synthesize and evaluate the existing Iranian evidence regarding the effectiveness of Mindfulness-Based Cognitive Therapy (MBCT) on rumination. The findings demonstrated a remarkably consistent pattern across the reviewed studies. All included investigations reported statistically significant reductions in rumination following MBCT interventions, regardless of the target population, study design, or clinical context. The consistency of these findings provides strong support for the effectiveness of MBCT as an intervention for reducing maladaptive repetitive thinking among Iranian populations. Furthermore, the observed effectiveness was not restricted to a particular disorder but extended across a wide range of psychological and medical conditions,

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suggesting that rumination functions as a transdiagnostic process that can be effectively targeted through mindfulness-based approaches.

One of the most important findings of the present review was the effectiveness of MBCT among individuals with depressive disorders. Several studies demonstrated substantial reductions in rumination among patients with major depressive disorder, often accompanied by improvements in depressive symptoms, executive functioning, dysfunctional attitudes, and emotional regulation (Afshar et al., 2024; Ariana Kia et al., 2014, 2016; Pasha et al., 2018; Shirinzadeh Dastgiri et al., 2015). This finding is theoretically consistent with the original development of MBCT, which was specifically designed to interrupt the cognitive processes associated with depressive relapse. Rumination represents a central mechanism through which depressive symptoms are maintained and exacerbated. Through mindfulness practices, individuals learn to disengage from repetitive negative self-referential thoughts and develop a more accepting and nonjudgmental relationship with their internal experiences. Consequently, the reduction of rumination observed in depressive populations likely reflects the capacity of MBCT to weaken habitual cognitive patterns that perpetuate negative mood states. The convergence of findings across multiple studies strengthens confidence in the role of MBCT as an effective intervention for depression-related cognitive vulnerabilities.

The review also demonstrated consistent benefits of MBCT among individuals with anxiety-related disorders and obsessive-compulsive symptoms. Studies involving generalized anxiety disorder, social anxiety disorder, comorbid anxiety and depression, and obsessive-compulsive disorder reported significant reductions in rumination alongside improvements in related cognitive processes such as thought-action fusion, perfectionism, and cognitive avoidance (Ghadampour et al., 2017; Khadem et al., 2023; Moqtader, 2016; Zarei et al., 2023). These findings are understandable from a cognitive-behavioral perspective because repetitive thinking serves as a maintaining factor in anxiety disorders, just as it does in depression. Individuals with anxiety frequently engage in anticipatory thinking, threat monitoring, and repetitive cognitive processing that resembles rumination. By cultivating present-moment awareness and reducing automatic engagement with distressing thoughts, MBCT appears to weaken the cognitive cycles that contribute to anxiety maintenance. The observed reductions in perfectionism and thought-action fusion further suggest that mindfulness practices facilitate greater cognitive flexibility and reduce rigid patterns of thinking commonly observed in anxiety-related conditions.

Another notable finding was the effectiveness of MBCT among populations experiencing chronic medical illnesses and health-related stressors. Significant reductions in rumination were reported among individuals with irritable bowel syndrome, type 2 diabetes, breast cancer, uterine cancer, insomnia disorder, and COVID-19-related psychological difficulties (Asoudi et al., 2021; Dana et al., 2022, 2023; Esmaeilzadeh Torshaye, 2025; Joudaki et al., 2022; Kazemi Rezaei et al., 2024; Moradi et al., 2024; Mousavi Nejad et al., 2019; Razavizadeh Tabadkan & Jajarmi, 2019a, 2019b). These findings highlight the broad applicability of MBCT beyond traditional psychiatric settings. Chronic illnesses often generate persistent concerns regarding health status, treatment outcomes, physical symptoms, and future functioning. Such concerns can promote repetitive cognitive processing and emotional distress. Mindfulness-based interventions may reduce these maladaptive responses by helping patients observe illness-related thoughts without becoming overwhelmed by them. The accompanying improvements in sleep quality, emotional regulation, fatigue, and perceived stress reported across several studies further support the notion that reductions in rumination may contribute to broader improvements in psychological adjustment and quality of life among medically ill populations.

The review additionally revealed substantial support for the effectiveness of MBCT among special and vulnerable populations. Studies involving pregnant women, infertile women, infertile couples, bereaved women, women dissatisfied with their spouses, adolescents, high school students, university students, and individuals experiencing romantic relationship dissolution consistently reported reductions in rumination and related psychological difficulties (Abdolmohammadi et al., 2025; Abedpour et al., 2024; Mohammadpanah Ardakan et al., 2024; Mohammadpour et al., 2020; Peymbarifar et al., 2021; Rahmani & Mansouri, 2020; Rostami, 2021; Sahoor et al., 2023; Sharifi Daramadi & Ghasempour, 2023; Tabatabaei Nejad & Ibn Yamin, 2021). These findings suggest that MBCT may be particularly valuable during periods of heightened life stress and adjustment challenges. Pregnancy, infertility, bereavement, marital dissatisfaction, and romantic loss often involve uncertainty, emotional distress, and repeated reflection on difficult experiences. Mindfulness training appears to provide individuals with alternative strategies for responding to distressing thoughts, thereby

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reducing the tendency to engage in repetitive cognitive processing. The observed improvements in quality of life, resilience, post-traumatic growth, and tolerance of ambiguity suggest that mindfulness-based interventions may foster adaptive coping mechanisms that extend beyond symptom reduction.

An important observation emerging from the reviewed studies is that reductions in rumination were frequently accompanied by improvements in other psychological variables. Studies reported simultaneous decreases in dysfunctional attitudes, cognitive avoidance, alexithymia, perfectionism, depression, anxiety, self-criticism, and emotional dysregulation, while increases were observed in resilience, emotional regulation, cognitive flexibility, and psychological well-being (Abedpour et al., 2024; Afshar et al., 2024; Dehghan Manshadi et al., 2021; Etemadi Rad et al., 2024; Khadem et al., 2023; Moqtader, 2016). This pattern supports the conceptualization of rumination as a central transdiagnostic process that influences numerous aspects of psychological functioning. When rumination decreases, individuals may experience broader improvements because they become less entangled in repetitive negative thinking and more capable of engaging in adaptive emotional and cognitive regulation strategies. Therefore, the effectiveness of MBCT may not be limited to reducing rumination itself but may extend to modifying interconnected psychological processes that contribute to emotional distress.

The findings also suggest that MBCT may exert its effects through several interrelated mechanisms. First, mindfulness training enhances attentional control, allowing individuals to recognize ruminative thoughts before becoming fully absorbed in them. Second, MBCT promotes decentering, enabling individuals to view thoughts as transient mental events rather than objective realities. Third, mindfulness practices encourage acceptance and nonjudgmental awareness, reducing efforts to suppress or avoid unwanted experiences. Finally, repeated mindfulness practice may strengthen emotional regulation capacities and cognitive flexibility, thereby reducing vulnerability to repetitive negative thinking. The consistency of positive outcomes across diverse populations supports the relevance of these mechanisms and suggests that they may operate similarly across different clinical and non-clinical contexts (Afshar et al., 2024; Ariana Kia et al., 2016; Etemadi Rad et al., 2024; Sadeghi et al., 2020).

Another important finding of this review concerns the durability of treatment effects. Most studies that included follow-up assessments reported that improvements were maintained over time. This stability suggests that participants may continue utilizing mindfulness skills after the completion of formal treatment. The maintenance of gains is particularly important because rumination is often a chronic and recurrent cognitive habit. The persistence of treatment benefits indicates that MBCT may facilitate enduring changes in how individuals relate to their thoughts and emotions. Such long-term benefits enhance the practical value of MBCT and support its use as both a therapeutic and preventive intervention.

Overall, the present review provides compelling evidence that MBCT is an effective intervention for reducing rumination across a wide variety of Iranian populations. The consistency of findings across different disorders, age groups, and life circumstances suggests that mindfulness-based approaches successfully address fundamental cognitive processes underlying emotional distress. The observed reductions in rumination, together with improvements in related psychological variables, highlight the potential of MBCT as a comprehensive intervention capable of promoting psychological health and resilience. Consequently, the findings support the growing recognition of mindfulness-based interventions as valuable components of contemporary mental health care.

Several limitations should be considered when interpreting the findings of this review. First, many of the included studies employed relatively small sample sizes, which may limit statistical power and reduce the generalizability of findings. Second, methodological heterogeneity across studies, including differences in intervention delivery, participant characteristics, and follow-up duration, complicated direct comparisons between investigations. Third, not all studies included long-term follow-up assessments, making it difficult to determine the durability of treatment effects in certain populations. Fourth, many studies relied exclusively on self-report measures, increasing the possibility of response bias. Finally, publication bias cannot be ruled out because studies reporting non-significant findings may have remained unpublished and therefore unavailable for inclusion in the review.

Future research should prioritize large-scale randomized controlled trials with adequate statistical power and longer follow-up periods. Researchers should investigate potential mediators and moderators of treatment effectiveness, including cognitive flexibility, self-compassion, emotional regulation, and resilience. Comparative studies examining

E-ISSN: 3041-8828

MBCT alongside other evidence-based interventions would help clarify its relative effectiveness. Future investigations should also explore the application of MBCT in underrepresented populations and clinical conditions. Additionally, greater use of multi-method assessment strategies, including behavioral, physiological, and clinician-rated measures, would strengthen the evidence base and provide a more comprehensive understanding of therapeutic mechanisms.

Mental health professionals may consider incorporating MBCT into routine clinical practice for individuals experiencing elevated levels of rumination, regardless of diagnostic category. Educational institutions, healthcare settings, and community mental health centers may benefit from implementing mindfulness-based programs as preventive and therapeutic interventions. Training programs for psychologists, counselors, and healthcare providers should include instruction in mindfulness-based approaches to increase access to effective treatments. Digital and online delivery formats may further expand accessibility, particularly for individuals who face barriers to traditional face-to-face services. Integrating MBCT into multidisciplinary treatment programs may enhance psychological well-being, improve emotional regulation, and reduce vulnerability to recurrent psychological distress across diverse populations.

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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The authors report no conflict of interest.

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