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A Systematic Literature Review of the Effectiveness of Mindfulness-Based Cognitive Therapy on Depression Among Older People

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ABSTRACT

The worldwide population of older people is rising rapidly. Age-related outcomes are significantly exacerbated by frailty, susceptibility, and an elevated risk of depression, 20% of older people worldwide suffer from depression. Mindfulness-Based Cognitive Therapy (MBCT) has become a feasible therapeutic approach, integrating cognitive therapy with mindfulness techniques. This review aims to systematically assess the efficacy of MBCT in alleviating depression in the older population. This review adheres to PRISMA criteria. Seven databases (Medline, Scopus, ClinicalKey for Nursing, Ebsco, Web of Science, Cochrane Library, and Grey Literature) were examined from 2017 to 2022. Three keywords utilized were depression, older people, and MBCT, with inclusion criteria: the respondent of the study aged 60 or older, written in English, and exclusion criteria: the article reports MBI or MBSR, the respondent adult, has a psychiatric diagnose, and qualitative study. The quality of the studies was assessed using the Joanna Briggs Institute's (JBI) critical appraisal tool. Eight studies were incorporated for the review. Research demonstrates that MBCT is advantageous in alleviating depression among the older population. This review indicates that MBCT is a potential alternative therapy for older people experiencing depression. It is imperative to emphasise that future MBCT research must demonstrate enhanced structural quality and require larger sample sizes.

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INTRODUCTION

The global population of older people is increasing, with population ageing occurring significantly faster than in previous periods. The proportion of people aged 60 and over is projected to nearly double, from 12% in 2017 to 22% of the total population by 2050 [1], [2]. By 2030, one in five people worldwide will be aged 60 or older [3]. By 2050, it is predicted that, for the first time, the number of people under 15 will equal those over 60, with each group accounting for 21% of the world's population [4]. This trend is expected to persist, with the global population of older individuals anticipated to reach 2.1 billion by 2050. The number of people aged 80 and above is projected to rise to 426 million by 2050, tripling from 2020 to 2050 [5].

Age-associated outcomes are significantly worsened by frailty, a multisystem decline marked by heightened vulnerability. Individuals experiencing frailty and related geriatric syndromes are increasingly prone to developing physical or cognitive impairments that affect their capacity to function independently [6]. The variety and multiplicity of stress that older individuals encounter have rendered mental health issues in later life increasingly prominent [7]. Depression has become a prevalent mental health issue and a significant public health concern, particularly for older people in many countries around the world [8]. Furthermore, depression is one of the serious mental health issues affecting older people in nursing homes. The primary symptoms of depression include a lack of interest in usual activities, diminished happiness and energy, insomnia, and an inability to enjoy life for those impacted for more than two weeks [9].

According to the World Health Organization (2017), 322 million people worldwide suffer from depression. That figure is expected to rise by 18.4% over the next ten years [10]. Furthermore, approximately 20% of older people aged 60 worldwide suffer from various depression symptoms. This condition poses a significant mental health challenge for older people, potentially exacerbating physical illnesses, hindering post-treatment recovery, and increasing the risk of suicide attempts [11]. Depression has strong effects and can lead to adverse health consequences for older people. Previous research has demonstrated that depression in older people is associated with cognitive impairment [12], the primary contributor to disability worldwide, increasing impact on relatives and social dependence, higher risk of morbidity and physical impairment, and chronic illnesses [13], risk of being hospitalized, and increased risk factors for suicidal behaviour [9].

The two primary types of therapy for depression among older people typically involve a combination of pharmacological and non-pharmacological [14]. Given the medical hazards linked to polypharmacy, older individuals who frequently take multiple medications for diverse health issues may gain advantages from nonpharmacological interventions. Consequently, several non-pharmacological options have been utilised, including counselling, behaviour modification, and psychotherapy [9]. One of the various psychotherapy approaches is Mindfulness-Based Cognitive Therapy (MBCT), a psychosocial group-based intervention developed by Segal et al. (2012). MBCT is a well-structured, evidence-based therapeutic regimen blending aspects of cognitive behaviour therapy and mindfulness meditation, and Methods to improve participants' comprehension of the relationships among their thoughts, emotions, physical experiences, and behaviours. Mindfulness is a psychological technique of intentionally focusing on present-moment sensations without judgment. It originates from philosophy and pertains to the acceptance of internal and external matters without further assessment of their origins, consequences, implications, desirability, or veracity [16].

MBCT was first formulated as a treatment to prevent the recurrence of depression [17]. Moreover, MBCT has proven to be highly effective in the treatment of bipolar disorder, major depressive disorder, and major depression [9], [18], [19], [20]. Moreover, MBCT demonstrated comparable efficacy in addressing treatment-resistant depression [21]. A separate study indicated that MBCT may provide benefits for anxiety disorders [22]. Moreover, MBCT has improved the quality of life [23].

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There is currently a systematic review of MBCT, but several differences exist. For example, Musa et al. (2020) conducted a systematic review of MBCT among older people with depressive disorder [9] Liu et al. (2019) described a systematic review of MBCT among individuals with symptoms of current depression (not specific to older people) [24]. Velden et al. (2015) showed the result of a systematic review of MBCT on people aged 18 years and above with recurrent major depression disorder [25]. Thomas et al. (2020) also conducted a systematic review of the MBCT, especially among older people, was conducted, but the respondent's characteristics included mental health diagnoses [26]. Furthermore, a recent meta-analysis on MBCT was conducted. But different from the purpose of this review, Rodrigues et al. (2024) assessed the effectiveness of MBCT when utilized alongside conventional pharmaceutical therapy for individuals with recurrent depression [27]. The meta-analysis reveals a substantial decrease in depression intensity during therapy, as measured by standardized scales.

This review of MBCT concerning depression was conducted to evaluate the treatment's effectiveness. The study's objectives are to assess the effectiveness of MBCT in reducing depression among older people. Based on the PICO question, this study specifically aims to determine the population consisting of older people (aged 60 and above) with the problem of depression. The intervention encompasses an MBCT program. The comparator may include treatment as usual (TAU), pharmacological interventions, or other psychological therapies. Finally, the outcome centers on changes in the depression score, measured using various validated scales. Further, this review was conducted to explore the methodology of the studies.

METHOD

A systematic search was conducted to identify the potentially eligible studies. The investigation used electronic databases, including Medline, Scopus, ClinicalKey for Nursing, Ebsco, Web of Science, and Cochrane Library. Grey literature (Google Scholar) was included in the review; only articles published in accredited journals can be included; theses, dissertations, and proceeding articles are excluded. The literature search focused on relevant publications from 2012 to 2022. Studies were identified from searches of titles, abstracts, and keywords. Three keywords were selected: Mindfulness-based cognitive therapy (MBCT), depression, and older people. Further searches of similar keywords were performed based on these keywords. The Boolean terms 'AND,' 'OR', and 'NOT' were combined with the keywords and matching words to narrow the search findings.

The inclusion and exclusion criteria for the literature search were determined to maintain the review's focus. The inclusion and exclusion criteria for this literature review were as follows:

Table 1 The Inclusion and Exclusion Criteria

Criteria Types	Inclusion criteria	Exclusion criteria
Population	Studies with older people (60 years or older) with the problem of depression	Studies on younger adults, adolescents, with reports of clinical depression or psychiatric diagnoses.
Intervention	MBCT as primary intervention	Studies using other interventions such as Mindfulness-Based Intervention (MBI) or Mindfulness-Based Stress Reduction (MBSR)
Comparator	Compared to treatment as usual (TAU), meditation, or other psychotherapy.	
Outcome	Depression scores as the primary outcome	
Study design	Quantitative study includes RCT, quasy-experiment, and cohort study	Case report, qualitative study, and opinion paper.

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Figure 1 shows the PRISMA flow diagram of the literature search process used in this study (28). The databases yielded 1.692 potential articles relevant to the research topic. After scrutiny for duplicate articles, 838 pieces were removed. In the subsequent phases, 853 titles and abstracts were reviewed, and 766 articles were excluded because they were not in English (n=19), dissertation and proceeding articles (n=63), Mindfulness-Based Intervention (MBI) or Mindfulness-Based Stress Reduction (MBSR) (n=467), psychiatric disorder (n=71), not mentioned the effectiveness (n=33), and not older people participant (n=113). Furthermore, 87 full texts and articles were reviewed. In this phase, 79 articles were removed for the following reasons: participants have psychiatric diagnoses (n=31), participants under 60 years old (n=29), did not explain the effectiveness of MBC (n=18), and the qualitative study (n=1). Finally, eight articles met the inclusion criteria and were retrieved for assessment.

The researchers meticulously extracted key information from all selected articles, including study design, study setting, sample size, age characteristics, depression outcome measures, secondary outcomes, adaptation, underlying theory, and findings. A standardized data extraction form was employed to maintain accuracy. To evaluate the potential impact of bias on the credibility of the evidence for this systematic review, the methodological quality and risk of bias of all included randomized clinical trials and quasi-experimental studies were assessed utilizing the Joanna Briggs Institute's (JBI) critical appraisal tool [36]. One researcher conducted all data collection procedures. The other three researchers are part of the supervisory team and act as mentors and quality controllers. They review the methods, ensure adherence to best practices, resolve uncertainty in study selection or data interpretation, and ensure this review meets academic standards. The synthesis method employed in this study is qualitative synthesis (narrative synthesis). This approach entails summarizing and interpreting results from various studies without statistical aggregation. Researchers group findings into themes and examine patterns across studies due to the heterogeneous designs, diverse methodologies, and varied outcome measures, which render statistical meta-analysis unfeasible.

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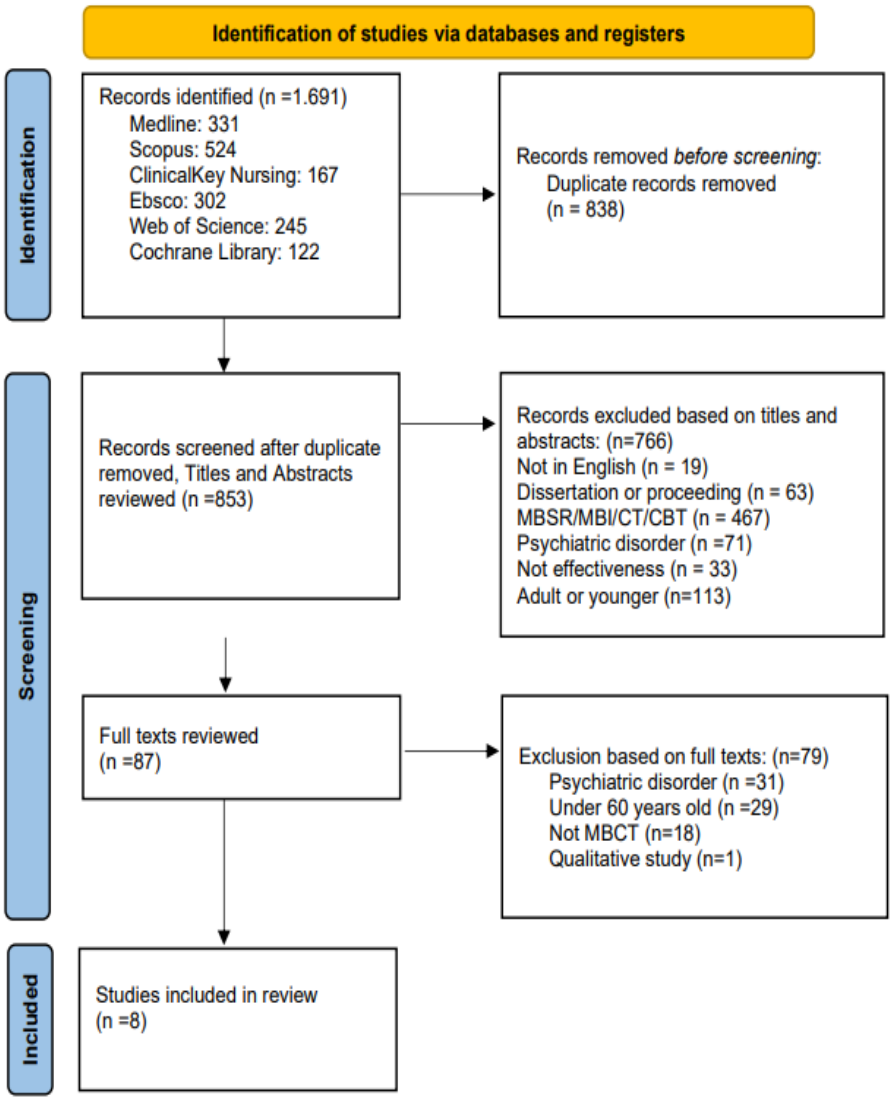

Figure 1 Prisma flow diagram of the literature search process

RESULTS

The result of this systematic literature review is stated in Table 2:

Table 2 The Effectiveness of MBCT on Depression Among Older People

NO	Name/ year / Country	Study design/ Setting	Sample size/ Min aged (year)	Control group	Depression Outcome Measures	Secondary outcome	Adaptation/ theory	Finding
1	Bein et al., (2022) / Thailand	RCT/ Primary care center	170/ 60 years	HEP	HAMD-17	MoCA EQ-5D	Older people promote conformity and safety / -	MBCT has helped alleviate depression in the older population.
2	Ozen et al.,	RCT/ Community	36/ 60 years	Waitlist	GDS	QoL-AD	- / -	Pre-score mean 12.86 (SD 8.73), Post-score 10.88

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	(2022) / Canada							(SD 8.32), mean difference = -1.98. (p = 0.050, effect size = –0.23). MBCT significantly reduced depression symptoms.
3	H. Li et al., (2022) / China	RCT/ Primary care center	60/ 60 years	TAU	HAMD	HAMA	More suitable for older people / -	HAMD mean scores decreased from 17.67 ± 6.68 at baseline to 5.83 ± 4.92. mean difference = -11.84. MBCT significantly lowers the HAMD total score (P<0.001).
4	Shih et al., (2021b) / Hongkong	RCT/ Community	57/ 60 years	Active control	HAMD	RRS	- / -	Mean of depression baseline = 13.36 (SD 3.41), mean of post-test = 7.02 (SD 4.54). mean difference = -6.34. P value < 0.001, η2 = 0.57. A significant reduction in depression symptoms.
5	Belliveau et al., (2021) / Italy	RCT/ Primary care center	61/ 60 years	TAU	PHQ-9	GAD-7	Accommodating the needs of older people / -	Pretest Mean PHQ-9 Score: 16.0 ± 5.9, Post-test Mean PHQ-9 Score: 8.2 ± 4.8, Mean Difference: –7.8, Significance: F (1, 35) = 10.68, p = 0.002, partial η^2 = 0.23, A significant reduction in symptoms of depression.
6	Meeten et al., (2015)/ United Kingdom	Quasi experiments/ Hospital & nursing homes	13/ 65 years	-	DASS-17	Riff-PWB-I	- / -	Pre-group Mean Score: 13.00 (SD 9.59), Post-group Mean Score: 9.11 (SD 10.64), Follow-up Mean Score: 8.22 (SD 7.24). p=.015, r=.48 Improvements in depression were noted.

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7	Foulk et al., (2014) / United States of America	Quasi experiments	50/ 61 years	-	GDS-15	HADS-A	Ageing specific adaptation / -	Pre-intervention Mean Score: 5.8, Post-intervention Mean Score: 4.6, Mean Difference: –1.2. Z = –30.5, p = 0.008. MBCT is well-suited to reduce the symptoms of depression.
8	O'Connor et al., (2014) / Denmark	Non RCT/ Community	73/ 65 years	Waitlist	BDI II	-	A particular need of older people / -	Pre-intervention Mean Score: 11.7 (SD 6.47), Post-intervention Mean Score: 10.9 (SD 7.5), Follow-up Mean Score: 6.8 (SD 3.95), p = 0.04. MBCT significantly reduces depression symptoms.

Note. RCT= Randomized Controlled Trial; HEP=Health Education Program; HAM-17= Hamilton Depression Rating Scale- 17; MoCa= Montreal Cognitive Assessment; EQ-5D=Europe Quality of life Questionnaire-5 dimensions; PHQ-9= Patient Health Questionnaire; GDS= Geriatric Depression Scales; RRS= Rumination Response Scales; TAU= Treatment as Usual; GAD-7= General Anxiety Disorder; DASS-17= Depression Anxiety Stress Scales; HAMA= Hamilton Anxiety Rating Scales; GDS-15= Geriatric Depression Scales-15 items; BDI-II= Beck Depression; Riff-PWB-I= The Riff Psychological Well-being Inventory).

To assess the potential impact of bias on the credibility of evidence in this systematic review, the methodological quality and risk of bias of all included randomized clinical trials and quasi-experimental studies were evaluated using the Joanna Briggs Institute's (JBI) critical appraisal tool.

Table 3 The Methodology Issues of The Studies

No	Name/ year	A	B	C	D	E	F	G	H	I	J
1	Bein / 2022	+	+	+	-	+	+	-	+	-	-
2	Ozen / 2022	+	+	+	-	-	-	+	+	+	-
3	Li et / 2022	+	+	+	+	+	-	+	+	+	+
4	Shih / 2021	+	+	+	-	-	+	+	+	-	-
5	Belliveau / 2021	+	+	+	+	-	-	+	+	+	+
6	Meeten / 2015	+	+	+	+	+	+	+	+	+	+
7	Foulk / 2014	+	+	+	-	-	+	+	+	-	-
8	O'Connor / 2014	+	+	+	+	+	+	+	+	-	+

Note: A=Research question/ objective**; B**=Inclusion/ exclusion criteria**; C**=Method of data collection**; D**=Ethical**; E**=Follow up**; F**=Experienced therapies**; G**=Data analysis**; H**=Result & conclusion**; I**=Limitation; **J**=Suggestions for future research.

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Characteristics of the Study

Two of the studies were carried out in the USA [29], [34], one study in the UK [33], one study in China [30], one study in Italy [32], one study in Hong Kong [31], one study in Denmark [35], and one study in Thailand [28]. The minimum age of the five studies was 60 years old [28], [29], [30], [31], [32]. Two studies were 65 years old [33], [35] and one was 61 years old [34]. The sample sizes for treatment groups ranged from 13-170.

Design

Five studies were randomized controlled trials [28], [29], [30], [31], [32]. Two studies were quasi-experiments [33], [34], and one more study was a non-randomized controlled trial [35]. Further, six studies included a control group. Two of these studies used Treatment As Usual (TAU) control groups [30], [32]. Two of these studies used waitlist control groups [29], [35], one study used the active control group [31], and one study used Health Enhancement Program (HEP) control groups [28].

Study setting

Three of the studies were conducted in the clinical setting; for example, the study of [28], [30], [32] recruited participants from the primary care centre, Foulk et al. (2014), the research was performed at a geriatric outpatient clinic. [34] . While three of the other studies were conducted in the community setting [29], [31] [35]. Furthermore, only one study was conducted in nursing homes, but not all participants were recruited; the others were conducted in other locations, such as Older People's Mental Health Services [33].

Theory and Adaptation of MBCT

None of the studies (n=8) mentioned the integrated theory of MBCT in the results of the investigations. Still, most studies just noted that the study conducted the research based on manualized MBCT interventions described by Segal [15], [37]. Five of the eight studies described that have modified the implementation of MBCT. O'Connor et al. (2014) mentioned that they had made minor adaptations to meet the particular needs of older people, such as reducing the 8-week program's sessions from 2.5 to 2 hours per session [35]. Foulk et al. (2014) talked about the Aging-Specific Adaptations, including Participant's body support during floor exercises with pillows and blankets, the choice to sit on a chair during activities, reduced seated meditation duration from 40 to 20-30 minutes, the social worker utilized a microphone during sessions, and the fonts on written handouts were enlarged [34].

The study by Belliveau et al. (2021) addressed the needs of older participants by shortening the duration of body scan meditation, replacing yoga mats with chairs during meditation sessions, engaging in seated yoga with adapted movements, prompting participants to adjust postures and pillows to enhance well-being and safety, slowing down the pace of walking meditation, ensuring that all participants could hear and understand by amplifying the voice, and incorporating more frequent breaks [32]. In addition, a study by Li et al. (2022) mentioned adapting MBCT to be more suitable for older people's physical condition and preventing falls [30]. Further, Bein et al. (2022) also reported that they had adapted the MBCT for elderly adults to increase comfort and safety, for example, by lowering sitting meditation time (maximal 20 minutes) and changing postures [28].

Outcome

The primary outcome of all the studies was depression symptoms measured by various measurement tools, such as the studies of Shih et al. (2021) and Li et al. (2022), which employed the Hamilton Depression Rating Scale (HAMD) as the primary outcome measure [30], [31], The study by Bein et al. (2022) assessed depressive symptoms using the Hamilton Depression Rating Scale-17 (HAMD-17) [28], Ozen et al., (2022) used Geriatric Depression Scale (GDS) to assess the depression of older people [29] while Foulk et al., (2014) used the short form of the Geriatric Depression Scale (GDS-15), consisting of only 15 items of a self-reported questionnaire designed specifically to assess depression in older people [34]. Further, O'Connor et al. (2014) assessed symptoms of depression with the Beck Depression Inventory (BDI II) as a 21-item self-reported measure [35], Meeten et al. (2015) used The Depression Anxiety Stress Scale- 21

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(DASS-21) as a measure of mood, which has good reliability for depression symptoms [33]. Belliveau et al. (2021) were measured using the Patient Health Questionnaire (PHQ-9) [32]. The majority of the studies have a secondary outcome (n=7), for example, anxiety [30], [32], [34], well-being [33], rumination [30], [31], quality of life [29], and cognitive functioning [28].

Methodology issues

The retrieved studies (see Table 2.9) showed that all studies described the research questions and or research objective (n=8), inclusions and exclusions criteria (n=8), methods of data collection (n=8), and also the results and conclusions (n=8). Unfortunately, only one of the studies did not mention data analysis [28]. Further, not all studies noted ethics in research studies. Only four studies stated it [30], [32], [33], [35]. Four studies included a follow-up post-intervention [30], [32], [33], [35] The follow-up periods ranged from 3 – 6 months. Five studies explained that the research team included experienced therapies [28], [32], [33], [34], [35]. Half of the studies (n=4) mentioned the limitations of the studies, such as small sample size [28], [30], [32], [33], and four studies provided suggestions for future research for example, a larger sample size and control group [30], [32], [33], [35].

DISCUSSION

The systematic literature review is designed to evaluate the efficacy of MBCT in diminishing depression levels in the older population. Eight articles satisfied the eligibility requirements. Many studies have demonstrated a positive correlation between MBCT treatment and symptoms of depression Bein et al. (2022) explained that MBCT has been effective in addressing depression by focusing on particular brain circuits linked to memory and attention management, thereby enhancing cognitive impairments, improving cognitive functioning, and increasing the functional connectivity of the default network [28]. Further, the study of Ozen et al. (2022) declared that MBCT diminishes judgmental thinking, fosters heightened awareness and alleviates burdens, enhances self-awareness and disengagement, and is associated with a decrease in symptoms of depression [29]. Another study of Li et al., (2022) identified significant enhancements in feelings of depression in patients with late-life depression, associated with augmented functional and structural connectivity, where the increase in brain connection exhibited a favourable correlation with clinical symptom improvements [30].

The intervention of MBCT, originally intended to prevent depression recurrence, has undergone investigation across many demographics over time. A recent meta-analysis (2024) elucidates that MBCT should be recommended for its positive impact on older people with depression. This study demonstrated that the MBCT treatment administered to older adults was successful in alleviating their depression [32]. Furthermore, Meeten et al. (2015) investigated the advantages of MBCT for older people with depression, focusing on a decrease in self-reported bad moods and an enhancement in the skills of awareness and non-judgmental acceptance [33]. Moreover, Foulk et al. (2014) asserted that MBCT is an effective nonpharmacological intervention for older people with depression, resulting in enhancements across multiple domains, including a reduction in ruminative thoughts and fewer sleep disturbances [34] .

In this review, a study from Shih et al., (2021) demonstrated that MBCT can reduce rumination, foster awareness of internal experiences, including persistent thoughts, fluctuating emotional states, and physiological responses akin to ruminative patterns, enhance mindfulness, and improve the capacity to redirect attention to the present moment consciously [31]. In the MBCT, participants acquire the skills to watch and accept, and relinquish their ideas, emotions, and sensations. Consequently, individuals undergo an alternative mode of relation rather than altering the experience (thought, feelings, and physical sensations) [38]. The curriculum encompasses activities including body scanning, breath awareness, seated meditation, and yoga meditation [39].

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This study emphasised that MBCT is a superior method for alleviating depression compared to other interventions such as a health-enhancing program (HEP), waitlist, treatment as usual (TAU), and active control. In the study of Belliveau et al. (2021), Participants in the control group received conventional care or therapy, which included pharmaceutical intervention and/or support from a primary care practitioner [32]. In addition, the TAU control group of Li et al. (2022) means that the control groups in the trial did not undergo any treatment; researchers conducted weekly visits to assess adverse occurrences [30]. Further, the study of Shih et al. (2021) indicated that the active control group was subjected to designated health-related subjects, including fall prevention and chronic pain, for a uniform duration [31]. Each session consisted of a one-hour physical exercise led by a trainer, supplemented by formal health education on a designated topic, and culminated with a group discussion. Ultimately, the respondents in Bein et al. (2022) did not learn about breathing methods or meditation but were educated on health promotion, therapy of music, nutrition, and physical activity [28].

Seven out of eight research studies were conducted in clinical and community environments. Only one study was performed in nursing facilities, but not all participants were enlisted; the remaining studies were undertaken in alternative settings, such as Older People's Mental Health Services. Research on depression among older people residing in nursing homes is constrained due to various factors. Diagnosing depression in this demographic is intricate since symptoms frequently coincide with other medical illnesses and cognitive deficits. The stigma associated with mental health concerns results in underreporting and a hesitance to seek assistance. Resource limitations, such as inadequate finance and personnel, impede a comprehensive study. Historically, nursing facilities have prioritised physical health care, frequently neglecting mental health considerations [40]. Simultaneously, executing a study in nursing homes is essential. Older individuals in nursing homes encounter tension and stressful circumstances due to psychological, physiological, and social changes [41].

Four of eight studies explain the limitations of the research of Ozen et al. (2022), and Li et al. (2022) indicated that limited sample sizes produce inaccurate estimations and may result in misleading conclusions and limited sample size, potentially affecting statistical power. Further, Shih et al. (2021) asserted that no subsequent evaluations were performed beyond the 8-week session or called follow-up, rendering the sustainability of the therapeutic results ambiguous. Therefore, the active control group was neither a standardized nor a validated program. Ultimately, Meeten et al. (2015) described that the participants' history of depression, including the age of beginning and the existence of chronic anguish and degenerative illnesses, was not examined. The deficiency of information in these investigations undermines their methodological rigour.

CONCLUSION

This review proposes that MBCT is a reasonable intervention among older people with depression, particularly for those experiencing adverse side effects from medication. The findings of this study indicate that this therapeutic program may effectively diminish depression as a suitable non-pharmacological treatment for older people. Furthermore, the existing evidence concerning this therapy is insufficient, and the methodological quality of the research requires enhancement. It is essential to underscore that subsequent research should exhibit greater structural quality, and more significant sample sizes are necessary. Based on the findings of the review, choosing nursing homes as research settings to conduct a study of MBCT is the most effective strategy to alleviate symptoms of depression and improve the quality of life for older people living in these institutions. Consequently, a current study to assess the efficacy of MBCT for older people experiencing depression at a nursing home in Indonesia is essential to assist them in addressing their mental health issues and enhancing their quality of life in their later years.

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AUTHOR CONTRIBUTIONS

Helena Patricia: Executed the systematic literature review for PhD research, conducted data extraction and analysis, and served as the principal author of the manuscript. Sharifah Munirah Syed Elias: Provided guidance during the research process, served as the corresponding author, and conducted a critical evaluation and refinement of the article. Noor Azizah Binti Mohd Ali: Contributed to formulating the review methodology, provided qualitative and quantitative analysis knowledge, and engaged in the article review process. Hema Malini: Oversaw the review effort, ensured methodological rigor, and participated in the final editing and approval of the manuscript.

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REFERENCES

[1] C. Worrall, M. I. Jongenelis, P. M. McEvoy, B. Jackson, R. U. Newton, and S. Pettigrew, "An Exploratory Study of the Relative Effects of Various Protective Factors on Depressive Symptoms Among Older People," *Front. Public Heal.*, vol. 8, p. 579304, Nov. 2020, doi: 10.3389/fpubh.2020.579304.

[2] P. Patra *et al.*, "Assessment of Depression in Elderly. Is Perceived Social Support Related? A Nursing Home Study : Depression and Social Support in Elderly.," *Adv. Exp. Med. Biol.*, vol. 987, pp. 139–150, 2017, doi: 10.1007/978-3-319-57379-3_13.

[3] C. Mathews, "Population Ageing in Lower- and Middle-income Countries .," *J. Popul. Ageing*, vol. 1, no. 17, pp. 1–4, 2024.

[4] S. Harper, "A Voice for all Ages," *J. Popul. Ageing*, pp. 1–4, 2024.

[5] N. N. Petrova and D. A. Khvostikova, "Prevalence, Structure, and Risk Factors for Mental Disorders in Older People," *Adv. Gerontol.*, vol. 11, no. 4, pp. 409–415, 2021, doi: 10.1134/s2079057021040093.

[6] A. Garmany, S. Yamada, and A. Terzic, "Longevity leap: mind the healthspan gap," *npj Regen. Med.*, vol. 6, no. 1, pp. 1–7, 2021, doi: 10.1038/s41536-021-00169-5.

[7] H.-W. Chuang, C.-W. Kao, M.-D. Lee, and Y.-C. Chang, "Effectiveness of Story-Centred Care Intervention Program in older persons living in long-term care facilities: A randomized, longitudinal study.," *PLoS One*, vol. 13, no. 3, p. e0194178, 2018, doi: 10.1371/journal.pone.0194178.

[8] WHO, "World Health Organization," 2016.

[9] Z. A. Musa, S. Kim Lam, F. Binti Mamat @ Mukhtar, S. Kwong Yan, O. Tajudeen Olalekan, and S. Kim Geok, "Effectiveness of mindfulness-based cognitive therapy on the management of depressive disorder: Systematic review," *Int. J. Africa Nurs. Sci.*, vol. 12, p. 100200, 2020, doi: https://doi.org/10.1016/j.ijans.2020.100200.

[10] L. Kalideen, J. M. Van Wyk, and P. Govender, "Demographic and clinical profiles of residents in long-term care facilities in South Africa: A cross-sectional survey," *African J. Prim. Heal. Care Fam. Med.*, vol. 14, no. 1, pp. e1–e9, Mar. 2022, doi: 10.4102/phcfm.v14i1.3131.

[11] N. Karami, M. Kazeminia, A. Karami, Y. Salimi, A. Ziapour, and P. Janjani, "Global prevalence of depression, anxiety, and stress in cardiac patients: A systematic review and meta-analysis," *J. Affect. Disord.*, vol. 324, no. 24, pp. 175–189, 2023, doi: 10.1016/j.jad.2022.12.055.

[12] J. Heo, J. Ryu, H. Yang, and K. M. Kim, "Serious leisure and depression in older adults: a study of pickleball players," *Leis. Stud.*, vol. 37, no. 5, pp. 561–573, 2018, doi: 10.1080/02614367.2018.1477977.

[13] M. C. Velázquez-Alva *et al.*, "Prevalence of malnutrition and depression in older adults living in nursing homes in Mexico City," *Nutrients*, vol. 12, no. 8, pp. 1–12, Aug. 2020.
[14] Z. Ebrahimi, H. Patel, H. Wijk, I. Ekman, and P. Olaya-Contreras, "A systematic review on implementation of person-centered care interventions for older people in out-of-hospital settings," *Geriatr. Nurs. (Minneap).*, vol. 42, no. 1, pp. 213–224, 2021, doi: https://doi.org/10.1016/j.gerinurse.2020.08.004.
[15] Z. V. Segal, J. D. Teasdale, J. M. Williams, and M. C. Gemar, "The mindfulness-based cognitive therapy adherence scale: Inter-rater reliability, adherence to protocol and treatment distinctiveness," *Clin. Psychol. Psychother.*, vol. 9, no. 2, pp. 131–138, 2002, doi: 10.1002/cpp.320.
[16] W. Kuyken and A. Evans, "Mindfulness-Based Cognitive Therapy for Recurrent Depression," in *Mindfulness-Based Treatment Approaches*, Second Edi., Elsevier Inc., 2014, pp. 29–60. doi: 10.1016/b978-0-12-416031-6.00002-5.
[17] W. Kuyken *et al.*, "Efficacy of mindfulness-based cognitive therapy in prevention of depressive relapse an individual patient data meta-analysis from randomized trials," *JAMA Psychiatry*, vol. 73, no. 6, pp. 565–574, 2016, doi: 10.1001/jamapsychiatry.2016.0076.
[18] K. Williams, S. Hartley, S. Langer, M. Manandhar-Richardson, M. Sinha, and P. Taylor, "A systematic review and meta-ethnographic synthesis of Mindfulness-based Cognitive Therapy for people with major depression.," *Clin. Psychol. Psychother.*, vol. 29, no. 5, pp. 1494–1514, Sep. 2022, doi: 10.1002/cpp.2773.
[19] S. H. W. Chan, W. W. K. Chan, J. Y. W. Chao, and P. K. L. Chan, "A randomized controlled trial on the comparative effectiveness of mindfulness-based cognitive therapy and health qigong-based cognitive therapy among Chinese people with depression and anxiety disorders," *BMC Psychiatry*, vol. 20, no. 1, pp. 1–14, 2020, doi: 10.1186/s12888-020-02994-2.
[20] D. E. M. Geurts, F. R. Compen, M. H. C. T. Van Beek, and A. E. M. Speckens, "The effectiveness of mindfulness-based cognitive therapy for major depressive disorder: evidence from routine outcome monitoring data," *BJPsych Open*, vol. 6, no. 6, pp. 1–7, 2020, doi: 10.1192/bjo.2020.118.
[21] S. J. Eisendrath *et al.*, "A Randomized Controlled Trial of Mindfulness-Based Cognitive Therapy for Treatment-Resistant Depression.," *Psychother. Psychosom.*, vol. 85, no. 2, pp. 99–110, 2016, doi: 10.1159/000442260.
[22] I. Szumska *et al.*, "Mindfulness-based cognitive therapy reduces clinical symptoms, but do not change frontal alpha asymmetry in people with major depression disorder.," *Int. J. Neurosci.*, vol. 131, no. 5, pp. 453–461, May 2021, doi: 10.1080/00207454.2020.1748621.
[23] B. Enjezab, M. Zarehosseinabadi, B. Farzinrad, and A. Dehghani, "The effect of mindfulness-based cognitive therapy on quality of life in perimenopausal women," *Iran. J. Psychiatry Behav. Sci.*, vol. 13, no. 1, pp. 1–9, 2019, doi: 10.5812/ijpbs.86525.
[24] J. J. W. Liu, N. Ein, and K. Fung, "Mindfulness-Based Cognitive Therapy's Effect on the Symptoms of Currently Depressed Individuals: A Systematic Review of Existing Meta-Analytic Evidence Les effets de la thérapie cognitive de pleine conscience sur les symptômes de sujets actuellement dépri," 2019.
[25] A. M. van der Velden *et al.*, "A systematic review of mechanisms of change in mindfulness-based cognitive therapy in the treatment of recurrent major depressive disorder.," *Clin. Psychol. Rev.*, vol. 37, pp. 26–39, Apr. 2015, doi: 10.1016/j.cpr.2015.02.001.
[26] R. Thomas, A. Chur-Hansen, and M. Turner, "A Systematic Review of Studies on the Use of Mindfulness-Based Cognitive Therapy for the Treatment of Anxiety and Depression in Older People," *Mindfulness (N. Y).*, vol. 11, no. 7, pp. 1599–1609, 2020, doi: 10.1007/s12671-020-01336-3.
[27] M. F. Rodrigues *et al.*, "Mindfulness-Based Cognitive Therapy for Treatment-Resistant Depression: A protocol for systematic review and meta-analysis," *PLoS One*, vol. 19, no. 10, pp. 1–9, 2024, doi: 10.1371/journal.pone.0306227.
[28] M. Bein *et al.*, "Mindfulness-based cognitive therapy vs. a health enhancement program for the treatment of late-life depression: Study protocol for a multi-site randomized controlled trial," *Front. Aging Neurosci.*, vol. 14, 2022, doi: 10.3389/fnagi.2022.976636.

[29] L. J. Ozen *et al.*, "The efficacy of mindfulness-based cognitive therapy to improve depression symptoms and quality of life in individuals with memory difficulties and caregivers: A short report," *Alzheimer's Dement. Transl. Res. Clin. Interv.*, vol. 8, no. 1, pp. 1–6, 2022, doi: 10.1002/trc2.12252.
[30] H. Li *et al.*, "Mindfulness-Based Cognitive Therapy Regulates Brain Connectivity in Patients With Late-Life Depression," *Front. Psychiatry*, vol. 13, no. February, pp. 1–10, 2022, doi: 10.3389/fpsyt.2022.841461.
[31] V. W. Y. Shih, W. C. Chan, O. K. Tai, H. L. Wong, C. P. W. Cheng, and C. S. M. Wong, "Mindfulness-Based Cognitive Therapy for Late-Life Depression: A Randomised Controlled Trial," *East Asian Arch. Psychiatry*, vol. 31, no. 2, pp. 27–35, Jun. 2021, doi: 10.12809/eaap2075.
[32] C. Belliveau *et al.*, "Effects of Mindfulness-Based Cognitive Therapy on Peripheral Markers of Stress and Inflammation in Older-Adults With Depression and Anxiety: A Parallel Analysis of a Randomized Controlled Trial," *Front. Psychiatry*, vol. 12, no. December, pp. 1–10, 2021, doi: 10.3389/fpsyt.2021.804269.
[33] F. Meeten, S. Whiting, and C. M. Williams, "An Exploratory Study of Group Mindfulness-Based Cognitive Therapy for Older People with Depression," *Mindfulness (N. Y).*, vol. 6, no. 3, pp. 467–474, 2015, doi: 10.1007/s12671-014-0279-1.
[34] M. A. Foulk, B. Ingersoll-Dayton, J. Kavanagh, E. Robinson, and H. C. Kales, "Mindfulness-Based Cognitive Therapy With Older Adults: An Exploratory Study," *J. Gerontol. Soc. Work*, vol. 57, no. 5, pp. 498–520, 2014, doi: 10.1080/01634372.2013.869787.
[35] M. O'Connor, J. Piet, and E. Hougaard, "The Effects of Mindfulness-Based Cognitive Therapy on Depressive Symptoms in Elderly Bereaved People with Loss-Related Distress: A Controlled Pilot Study," *Mindfulness (N. Y).*, vol. 5, no. 4, pp. 400–409, 2014, doi: 10.1007/s12671-013-0194-x.
[36] T. H. Barker *et al.*, "The revised JBI critical appraisal tool for the assessment of risk of bias for quasi-experimental studies," *JBI Evid. Synth.*, vol. 22, no. 3, 2024, [Online]. Available: https://journals.lww.com/jbisrir/fulltext/2024/03000/the_revised_jbi_critical_appraisal_tool_for_the.4.aspx
[37] Z. V Segal, J. D. Teasdale, and J. M. G. Williams, "Mindfulness-Based Cognitive Therapy: Theoretical Rationale and Empirical Status.," in *Mindfulness and acceptance: Expanding the cognitive-behavioral tradition.*, New York, NY, US: The Guilford Press, 2004, pp. 45–65.
[38] F. Açikgöz and A. Karaca, "The effect of a mindfulness based cognitive therapy program on depression, anxiety, stress, and cognitive flexibility in nursing students: A randomized clinical trial," *J. Prof. Nurs.*, 2024, doi: https://doi.org/10.1016/j.profnurs.2024.12.005.
[39] Z. A. Musa, K. L. Soh, F. Mukhtar, K. Y. Soh, T. O. Oladele, and K. G. Soh, "Effectiveness of mindfulness-based cognitive therapy among depressed individuals with disabilities in Nigeria: A randomized controlled trial," *Psychiatry Res.*, vol. 296, p. 113680, 2021, doi: 10.1016/j.psychres.2020.113680.
[40] V. A. Tesky *et al.*, "Depression in the nursing home: A cluster-randomized stepped-wedge study to probe the effectiveness of a novel case management approach to improve treatment (the DAVOS project)," *Trials*, vol. 20, no. 1, pp. 1–8, 2019, doi: 10.1186/s13063-019-3534-x.
[41] H. Gök Ugur, Y. Yaman Aktaş, O. S. Orak, O. Saglambilen, and İ. Aydin Avci, "The effect of music therapy on depression and physiological parameters in elderly people living in a Turkish nursing home: a randomized-controlled trial," *Aging Ment. Heal.*, vol. 21, no. 12, pp. 1280–1286, Dec. 2017, doi: 10.1080/13607863.2016.1222348.