International Journal of Mental Health

ISSN: 0020-7411 (Print) 1557-9328 (Online) Journal homepage: www.tandfonline.com/journals/mimh20

Non-pharmacological interventions for the treatment of depression in mid-to-older age minority ethnic populations: a scoping review

Amirah Akhtar, Emmanuel Nwofe, Sahdia Parveen & Karen Windle

INTERNATIONAL JOURNAL OF MENTAL HEALTH
https://doi.org/10.1080/00207411.2025.2472433

Routledge
Taylor & Francis Group

Non-pharmacological interventions for the treatment of depression in mid-to-older age minority ethnic populations: a scoping review

Amirah Akhtar[a], Emmanuel Nwofe[a], Sahdia Parveen[a] and Karen Windle[a,b]

[a]Centre for Applied Dementia Studies, University of Bradford, United Kingdom[b]School of Nursing and Paramedic Science, Ulster University, United Kingdom

ABSTRACT

People from minority ethnic (ME) backgrounds are at greater risk of developing depression but are less likely to receive treatment, perpetuated by health inequalities. Non-pharmacological interventions are recommended as the first-line treatment for depression. This scoping review aimed to map international evidence on non-pharmacological interventions for depression in ME populations aged 40 and above. A scoping review was conducted using Medline, PsycINFO, CINAHL, Psychology and Behavioral Sciences Collection, AMED and Embase. Twenty-one studies were included. Six interventions were identified: Cognitive Behavior Therapy, Behavioral Activation, Mindfulness-based, Reminiscence Therapy, Logo-Autobiography and Social Group intervention. Interventions were adapted for ME populations via translation of materials and to the 'local context' such as incorporating cultural norms and understanding of depression. This review found a lack of non-pharmacological interventions for depression in people of ME background in the UK. This review indicates a need for non-pharmacological interventions for depression in ME populations in the UK. Recruiting people of ME backgrounds over the age of 40 for randomized controlled trials requires prioritization. It is recommended that non-pharmacological interventions for depression are culturally adapted and co-produced with ME populations.

KEYWORDS
Mood disorders; prevention; mental wellbeing; interventions; minority ethnic

CONTACT Amirah Akhtar a.akhtar46@bradford.ac.uk Centre for Applied Dementia Studies, University of Bradford, Bradford, United Kingdom.

Supplemental data for this article can be accessed online at https://doi.org/10.1080/00207411.2025.2472433.

Introduction

Depression is the third leading cause of disability worldwide (World Health Organization, 2017) with rates of prevalence increasing since the COVID-19 pandemic, adding to the global disease burden (Santomauro et al., 2021). Depression is associated with a reduction in daily functioning (de Jonge et al., 2018), impaired cognitive functioning (Akhtar et al., 2024; Crowe et al., 2020) and is considered a risk factor for long-term conditions such as dementia (Livingston et al., 2024). UK prevalence rates for depression range from 11.3% for mild depression and 3.3% for severe cases (de la Torre et al., 2021). Some people of minority ethnic (ME) backgrounds experience higher rates of depression and are more likely to suffer from chronic, prolonged episodes of depression (Proto & Quintana-Domeque, 2021; Smith et al., 2020). For example, Williams et al. (2015) examined depression in older adults in the UK, finding that prevalence varied significantly by ethnic group, affecting 9.7% of White Europeans, 15.5% of South Asians, and 17.7% of Black Caribbean participants. This ultimately has a negative impact on quality of life of the person living with depression, family members, as well as posing a significant burden on health care systems (James et al., 2018; Kyu et al., 2018).

The World Health Organization defines ME groups as being smaller in number than the rest of the population, self-identifying as sharing an ethnicity (e.g., based on culture or language), and not having a dominant position economically, politically, or socially (World Health Organization, 2022). In England and Wales, the majority population is made up of white British (82%) and 18% are considered ME namely from black, Asian, mixed, or other ethnic groups (HM Government, 2023). Higher prevalence rates of mental health issues and poorer treatment outcomes for ME populations in the UK are linked to deprivation, exacerbated by COVID-19 (Platt & Warwick, 2020) and perceived racial discrimination (Hackett et al., 2020). Despite higher prevalence rates, people from ME backgrounds demonstrate lower rates of recognition and treatment, and poorer outcomes (Pickett et al., 2013).

A study conducted in the UK found ethnic health inequalities in the referral, assessment and treatment process of NHS Talking Therapies (Harwood et al., 2023). People of ME background were less likely to receive an assessment, and those who did were less likely to receive treatment (Harwood et al., 2023). Barriers to help-seeking and treatment uptake include stigma and mistrust of service providers. Receiving a preferred psychosocial intervention has been demonstrated to reduce dropout rates and improve therapeutic alliance (E. Windle et al., 2020). Pharmacological treatments for depression may not be the preferred option for individuals of ME background, with studies suggesting a reluctance toward use of anti-depressants. Reasons for this include concerns around dependency, potential side effects, and feeling emotionally numb (Holvast et al., 2017; Iturralde et al., 2021; Nair et al., 2020). Furthermore, prescribing medication for depression in an aging population becomes complex due to polypharmacy (Wiersema et al., 2022). A two-year longitudinal study by Schaakxs et al., (2018) examined the association between age and course of depression. People aged seventy and above experienced greater symptom severity compared with younger adults and a greater likelihood of still having a diagnosis of depression after two years, even after adjusting for physical illness and antidepressant use. This suggests a need for alternative, non-pharmacological treatments for depression which are not primarily based on medication (Givens et al., 2007).

People of ME background are also more likely to attribute psychosocial causes of depression compared to biological causes (Birtel & Mitchell, 2023; Karasz et al., 2019). This may explain why some ME populations perceive pharmacological treatments for depression less effective (Givens et al., 2007). Furthermore, systematic reviews comparing anti-depressants with non-pharmacological interventions such as exercise or cognitive behavioral therapy (CBT) have found pharmacological and non-pharmacological interventions to be equally effective in reducing depressive symptoms (Fournier et al., 2022; Recchia et al., 2022). As such, non-pharmacological interventions for depression are recommended as first choice of treatment (NICE, 2022).

Culturally adapted psychological interventions can address issues such as language barriers and cultural factors and have shown to be effective in reducing depressive symptoms and improving treatment outcomes in ME populations (Arundell et al., 2021; Gater et al., 2010; Rafique et al., 2019). Non-pharmacological interventions offer culturally sensitive and potentially safer alternatives to pharmacological treatments. Various reviews on the clinical effectiveness of interventions to reduce symptoms of depression have been conducted in recent years. Bellón et al. (2021) conducted a systematic review and meta-analysis of fourteen studies on exercise interventions for depression and found a small reduction in symptoms. Serrano-Ripoll et al. (2022) conducted a review of smartphone application psychological interventions for depression and found a moderate reduction in symptoms. These reviews did not report on ME populations, which is one of the major limitations and gaps in the current evidence of depression interventions. Only one previous review was found, which evaluated non-pharmacological interventions for depression in older adults of ME background. However, the review was limited to the United States and published over a decade ago (Fuentes & Aranda, 2012).

To help reduce gaps in health inequalities, it is vital to gain a better understanding of the type of non-pharmacological interventions currently available to treat depression in ME communities. This scoping review aims to address a critical gap by mapping international evidence on non-pharmacological interventions specifically targeting depression in ME populations aged 40 and above (mid-to-older age), an area overlooked in traditional reviews. Changing behaviors in mid-life, such as that to prevent depression recurrence appears to have the greatest influence on a person's functional trajectory (K. Windle et al., 2009).

Review questions

The review aims to address three specific questions:

1. What non-pharmacological interventions for depression have been utilized for mid-older age adults of ME groups?
2. What are the characteristics of the populations targeted for the interventions?
3. What are the treatment characteristics of depression interventions in ME groups (i.e., treatment modality, format, the context of delivery, cultural adaptation, and provider type)?

Materials and methods

The scoping review followed the standards of Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) Checklist (Supplementary file 1). A protocol for the review is registered with Open Science Framework and can be accessed via the following web address: https://osf.io/wucj2. Given the broad research questions aiming to capture the breadth of evidence within this area, a scoping review methodology was deemed most appropriate. This scoping review was conducted in accordance with the Joanna Briggs Institute (JBI) methodology for scoping reviews (Peters et al., 2020). This included 1) developing a research question, (2) searching literature by using inclusion and exclusion criteria, (3) selecting articles, (4) charting of data extracted from included articles, and (5) collating, summarizing, and reporting the findings. Assessing the quality of evidence in scoping reviews is not mandatory and is a secondary concern. A quality assessment was not conducted as it was deemed more valuable to include heterogeneous outputs that span the area, allowing for a greater insight into the research questions outlined. The current scoping review did not require ethical approval.

Participants

Studies were eligible for inclusion if the sample size comprised 50% or more people from ME backgrounds. For this review, ME is defined as where a particular ethnic group is living in a country where the majority of people belong to a different ethnic group. It is acknowledged that participants may be experiencing co-morbid conditions alongside their depression. However, studies with a focus on treating depression only were included, and co-morbid physical health and mental health conditions (i.e., post-traumatic stress disorder, diabetes, cancer) were excluded. As we were interested in non-pharmacological interventions for depression in mid-to-older age ME adults, studies with an average age of sample at 40 years and above were included. We were interested in both male and female participants.

Concept

Studies reporting on non-pharmacological interventions for depression were included, including studies comparing a non-pharmacological intervention to a pharmacological intervention. Studies reporting solely on pharmacological interventions were excluded.

Context

International evidence from all geographical locations and settings (e.g., acute care, primary health care, the community) was included.

Type of evidence sources

Studies of quantitative, qualitative, and mixed-method design were included, which reported on cultural adaptation, pilot, feasibility, and acceptability of non-pharmacological interventions for depression in ME groups. Grey literature, such as unpublished theses, were eligible for inclusion. Protocol papers, opinion pieces, reviews, secondary analysis, intervention development papers without pilot data, follow-up studies, and cost-effectiveness studies were excluded as they were deemed not to be likely to contain relevant information to answer the review questions.

Search strategy

The search strategy was developed by the team, and support was provided by a subject librarian. Subject headings and free text words were identified for ethnicity, ME group, religion, depression, and non-pharmacological treatments. We searched six electronic databases: EMBASE, MEDLINE, CINAHL, PsycINFO, Psychology and Behavioral Sciences Collection, and AMED. No language or date restrictions were applied.

The original search was conducted on August 29, 2023, studies were searched from inception with no date restrictions. The search was updated on December 29, 2024, with a date restriction from 2023 to 2025 to capture any studies published since our original search. We searched grey literature, including thesis databases and reference lists of relevant reviews and included studies. The search strategy is presented in Supplementary file 2.

Evidence screening and selection

Records were managed and screened using Covidence software version 2.0. Detailed instructions for screening were developed, shared, and agreed upon with the research team to ensure consistency. This was piloted during title and abstract screening for 30 records and eligibility criteria were clarified as needed. Two reviewers (AA, EN) conducted independent screening of at least 10% of records. This was to ensure screening instructions were clear and sufficient and to detect any discrepancies in screening. Once we were confident that the screening process was robust, screening continued with a single reviewer. Conflicts were resolved via a third reviewer (SP). Following this, 10% of the full text was screened by two reviewers (AA, EN), followed by single screening (AA).

Data extraction

Data extraction was conducted using Covidence. Data was extracted independently; however, input was sought from the team when necessary. A data extraction form was used, the details of which were agreed beforehand by the team and adjusted as necessary (see supplement 3 for data extraction form).

Data analysis

A descriptive, narrative approach was taken to data analysis as JBI guidelines for scoping reviews recommended. This reflected the research questions, including a summary of population, geographical focus, types of interventions, experience of intervention and any cultural adaptations.

Results

The search results are detailed in the PRISMA diagram (Figure 1). 13,282 unique references were retrieved from databases and four from citation searching. Of these, 21 studies were considered eligible for inclusion, see Table 1 for study characteristics.

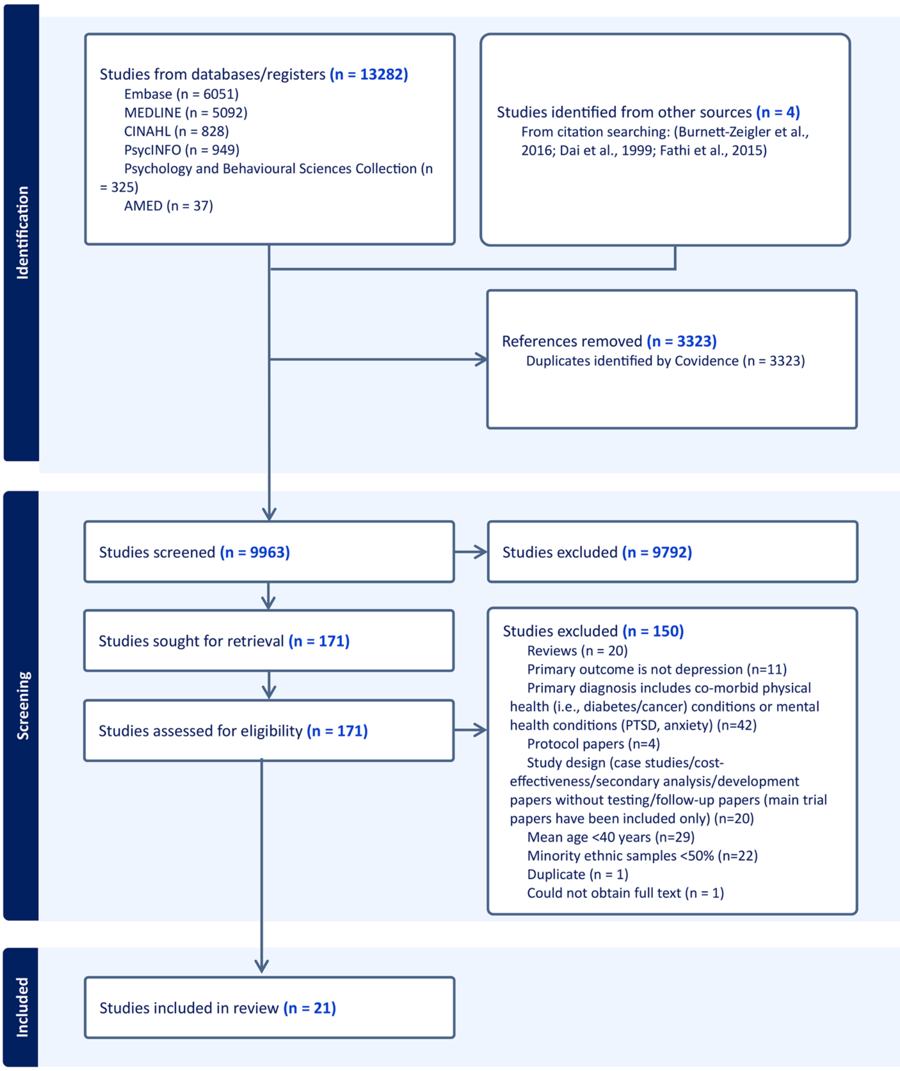

Figure 1. PRISMA flow diagram.

Ethnicity and geographical focus

Of the 21 included studies, 17 were based in the United States of America (USA) (Burnett-Zeigler et al., 2019; Burnett-Zeigler et al., 2016; Cho et al., 2013; Ciccolo et al., 2022; Collado et al., 2014; Dai et al., 1999; Diwan et al., 2023; Gitlin et al., 2013; Glueckauf et al., 2012; Hong et al., 2023; Hwang et al., 2015; Lopez-Maya et al., 2019; Schmaling & Hernandez, 2008; Ward & Brown, 2015; Ward et al., 2021; Yeung et al., 2013; Yeung et al., 2014).

Eight of these studies focused on the African American population (Burnett-Zeigler et al., 2019; Burnett-Zeigler et al., 2016; Ciccolo et al., 2022; Gitlin et al., 2013; Glueckauf et al., 2012; Hong et al., 2023; Ward

Table 1. Study characteristics.

Randomized controlled trials				
Author (year)	Setting and Sample	Intervention	Comparator	Outcome measure
Ciccolo et al. (2022)	**Setting:** USA **Ethnicity:** Black/African American, not Hispanic/Latino (78%) Black/African American, Hispanic/Latino (14%) Black African American, Other (8%) **Sample size:** 50 **Gender:** Male 100%	**Type:** Resistance training (RT) with BA components **Duration:** 2 sessions per week over 12 weeks = total 24 sessions **Delivery:** at university laboratory, via a doctoral student and licensed mental health counselor **Sample size:** 25 **Mean Age (SD):** 41.68 (13.44)	Attention-control (Health, Wellness, and Education) **Sample size:** 25 **Mean age (SD):** 41.00 (11.29)	Patient Health Questionnaire-9 (PHQ-9)
Ward et al. (2021)	**Setting:** USA **Ethnicity:** African American **Sample size:** 132	**Type:** CBT: Culturally adapted Oh Happy Days Class (OHDC) (Group) **Duration:** 12 sessions plus 1 booster session 3 months post-intervention **Delivery:** see Ward and Brown (2015) **Sample size:** not reported per group **Gender:** Male 32.43%; Female 67.57% **Mean age (SD):** 51.08 (8.4)	**Type:** Active control group: Coping with depression (CWD) **Duration:** 12 sessions plus 1 booster session 3 months post-intervention **Delivery**: see Ward and Brown (2015) **Sample size:** not reported per group **Gender:** Male 22.22%; Female 77.8% **Mean age (SD):** 52.17 (6.5)	Center for Epidemiological Studies Depression Scale (CES-D) Quick Inventory of Depression Symptomology – Clinician Rated (QIDS-CR)
Lopez-Maya et al. (2019)	**Setting:** USA **Ethnicity:** Latino (100%) **Sample size:** 76	**Type:** Mindful Awareness Practices for Daily Living Program (MAPs) (Group) **Duration: 6 sessions** **Delivery:** in-person or online via a certified teacher of mindfulness practice **Sample size:** English speaking group: 20 Spanish speaking group: 18 **Gender:** English speaking group: Male 25%; Female 75% Spanish speaking group: Male 11.1%; Female 88.9% **Mean age (SD):** English speaking group: 44.2 (17.7) Spanish speaking: 42.5 (15.2)	**Type:** Health education **Duration:** 6 sessions **Sample size:** English speaking group: 20 Spanish speaking group: 18 **Gender:** English speaking group: Male 20%; Female 80% Spanish speaking group: Male 27.8%; Female 72.2% **Mean age (SD):** English speaking group: 43.6 (14.7) Spanish speaking group: 40.5 (14.3)	Becks Depression Inventory (BDI)

(*Continued*)

Table 1. Continued.

Author (year)	Setting and Sample	Intervention	Comparator	Outcome measure
		Randomized controlled trials		
Hwang et al. (2015)	**Setting:** USA **Ethnicity:** Chinese American (100%) **Sample size:** 50	**Type:** Cognitive Behavior Therapy (CBT) **Duration:** 12 sessions **Delivery:** by Chinese therapists **Sample size:** 23 **Gender:** Male 26%; Female 74% **Mean age (SD):** 45.7 (12.6)	**Type:** Culturally adapted CBT (CaCBT) **Duration:** 12 sessions **Sample size:** 27 **Gender:** Male 30%; Female 70% **Mean age (SD):** 44.8 (10.7)	Hamilton Depression Rating Scale (HDRS)
Gitlin et al. (2013)	**Setting:** USA **Ethnicity:** African American **Sample size:** 208.	**Type:** Beat the Blues; home based intervention (Based on Behavioral Activation (BA) **Duration:** 10 sessions **Delivery:** at home via a social worker **Sample size:** 106 **Gender:** Male 20.8%; Female 79.3% **Mean age (SD):** 68.9 (8.9)	**Type:** Wait-list control **Sample size:** 102 **Gender:** Male 22.6%; Female 77.5% **Mean age (SD):** 70.3 (8.4)	PHQ-9
Dai et al. (1999)	**Setting:** USA **Ethnicity:** Chinese American (100%) **Sample size:** 30	**Type:** CBT **Duration:** 8 sessions **Delivery:** not mentioned, but materials developed by two psychiatrists. **Sample size:** 23 **Gender:** Male 30.4%; Female 69.6% **Mean age (SD):** 71.9 (11.9)	**Type:** Control group **Sample size:** 7 **Gender:** Male 71.43%; Female 28.57% **Mean age (SD):** 75.6 (7.5)	HDRS
Pre and post-test				
Burnett-Zeigler et al. (2016)	**Setting:** USA **Ethnicity:** African American (100%) **Sample size:** 31 **Mean age (SD):** 53.68 (SD not reported) **Gender:** Female (100%)	**Type:** Mindfulness based (M-Body) **Duration:** 8 sessions **Delivery:** by a clinical psychologist	Not applicable	IDS-SR
Ward and Brown (2015)	**Setting:** USA **Ethnicity:** African American **Sample size:** **Pilot 1:** 15 **Pilot 2**: 35 **Mean age (SD):** **Pilot 1:** 75 (5.52) **Pilot 2:** 51 (8.02) **Gender:** **Pilot 1:** Female (100%) **Pilot 2:** Male 48.6%; Female 51.4%	**Type:** CBT - Oh Happy Days Class (Group format) **Duration:** 12 sessions **Delivery:** by 3 African American mental health therapists	Not applicable	HDRS CES-D

(*Continued*)

Table 1. Continued.

Randomized controlled trials				
Author (year)	Setting and Sample	Intervention	Comparator	Outcome measure
Yeung et al. (2014)	**Setting:** USA **Ethnicity:** Chinese American **Sample size:** 22 **Completers of intervention (>75% attendance):** 15 **Non-completers:** 7 **Mean age (SD):** **Completers:** 53.0 (13) **Non-completers:** 51.0 (11) **Gender:** **Completers:** Male 20%; Female 80% **Non-completers:** Male 14%; Female 86%	**Type:** Relaxation-Response Group intervention (mind-body) **Duration:** 8 sessions **Delivery:** in a conference room at the health center. Delivered by staff with extensive experience working with Chinese populations.	Not applicable	HDRS (Chinese version)
Yeung et al. (2013)	**Setting:** USA **Ethnicity:** Chinese American (100%) **Sample size:** 14 **Mean age (SD):** 53.0 (14) **Gender:** Male 36%; Female 64%	**Type:** Qigong intervention (mind-body group exercise) **Duration:** 24 sessions (2 sessions per week over 12 weeks) **Delivery:** at the health center, via bilingual researchers	Not applicable	HDRS
Chaudhry et al. (2009)	**Setting:** UK **Ethnicity:** Pakistani (100%) **Sample size:** 9 **Mean age (SD):** 54.1 (9.0) **Gender:** Female (100%)	**Type:** Social group intervention **Duration:** 10 sessions **Delivery:** at the local community center	Not applicable	Urdu versions of the 20-item Self Reporting Questionnaire (SRQ) Schedule for Clinical Assessment in Neuropsychiatry (SCAN) interview
Schmaling and Hernandez (2008)	**Setting:** USA **Ethnicity:** Mexican American (100%) **Sample size:** 117 **Mean age (SD):** 42.2 (14.2) **Gender:** Male 13.7%; Female 87.1%	**Type:** Brief Behavior therapy: problem solving treatment **Duration:** 8 sessions **Delivery:** The three therapists were students in a master's degree program in clinical psychology, of Latino ethnicity, and fluently bilingual in Spanish and English, with Spanish being the first language for two of the three therapists. Two were female and one was male.	Not applicable	The Hopkins Symptom Checklist (HSCL)

(*Continued*)

Table 1. Continued.

Randomized controlled trials				
Author (year)	Setting and Sample	Intervention	Comparator	Outcome measure
Quasi-experimental				
Cho et al. (2013)	**Setting:** USA **Ethnicity:** Korean **Sample size**: 40 **Gender:** Female (100%)	**Type:** Logo-Autobiography (LA) **Condition 1:** Experimental group with medication (Ex-Med) **Sample size:** 10 **Condition 2:** Experimental group without medication (Ex-NoMed) **Sample size:** 10 **Duration:** 6 sessions **Delivery:** by a LA therapist **Mean age (SD):** 56.10 (15.44)	**Type:** Control group **Condition 1:** with medication (Con-Med) **Sample size:** 10 **Condition 2:** Control group without medication (Con-NoMed) **Sample size:** 10 **Mean age (SD):** 47.40 (17.4)	CES-D (Korean version)
Qualitative				
Burnett-Zeigler et al. (2019)	**Setting:** USA **Ethnicity:** African American **Sample size:** 27 **Mean age (SD):** 51.10 (SD not reported) **Gender:** Female (100%)	See Burnett-Zeigler et al. (2016)	Not applicable	Not applicable
Fathi et al. (2016)	**Setting:** Austria **Ethnicity:** Iranian **Sample size:** 23 **Mean age (SD):** 40.4 (5.62) **Gender:** Male 24%; Female 76%	**Type:** CBT (group and individual) **Duration:** 17 sessions **Delivery:** by therapist (first author)	Not applicable	Not applicable
Mixed-methods				
Diwan et al. (2023)	**Setting:** USA **Ethnicity:** Vietnamese and Hispanic **Sample size:** 165 total Vietnamese: 92 Hispanic: 73 **Mean age (SD):** Vietnamese: 73.7 (8.0) Hispanic: 76.0 (9.5) **Gender:** Vietnamese: Male 44%; Female 48% Hispanic: Male 25%; Female 75%	**Type:** Reminiscence therapy **Duration:** 12 weeks **Delivery:** by community workers (ethnically matched) at the participants home	Not applicable	PhQ-9 Geriatric Depression Scale-15 (GDS-15)

(*Continued*)

Table 1. Continued.

Randomized controlled trials				
Author (year)	Setting and Sample	Intervention	Comparator	Outcome measure
Hong et al. (2023)	**Setting:** USA **Ethnicity:** African American **Sample size:** 31 **Mean age (SD):** 51.9 (SD not reported) **Gender:** Female (100%)	**Type:** Mindfulness intervention (M-Body) **Duration:** 8 sessions **Delivery:** by the Principal Investigator of the study	Not applicable	Inventory of Depressive Symptoms – Self-Report (IDS-SR)
Fathi et al. (2015)	**Setting:** Austria **Ethnicity:** Iranian **Sample size:** 23 **Mean age (SD):** 40.4 (SD 5.62) **Gender: Male 24%;** Female 76%	**Type:** CBT (Group vs Individual) **Duration:** 17 sessions **Delivery:** by therapist (first author) Sample characteristics per group not reported	**Type:** Wait-list control (Sample characteristics per group not reported)	Farsi version BDI-II
Collado et al. (2014)	**Setting:** USA **Ethnicity:** Latino **Sample size:** 10 **Mean age (SD):** 41.45 (14.99) **Gender:** Male 30%; Female 70%	**Type:** Behavioral Activation **Duration:** 10 sessions **Delivery:** via trained researchers	Not applicable	BDI-II
Glueckauf et al. (2012)	**Setting:** USA **Ethnicity:** African American **Total sample size:** 11 **Overall gender distribution:** Male 9.09%; Female: 90.90%	**Type:** Telephone CBT **Duration:** 12 sessions **Delivery:** by 9 counselors (4/9 African American); 2 Female; 7 Male **Sample size: 6** **Gender:** per group not specified **Mean age (SD):** 61.50 (10.27)	Face to face CBT **Duration:** 12 sessions **Delivery:** at the University Public Library **Sample size:** 5 **Gender:** per group not specified **Mean age (SD):** 54.00 (9.25)	CES-D
Gater et al. (2010)	**Setting:** UK **Ethnicity:** Pakistani **Sample size:** 123 **Gender:** Female (100%)	**Type:** Social group intervention **Duration:** 10 sessions **Sample size: 39** **Delivery:** at the local community center, facilitated by four multilingual graduate women **Mean age (SD): 41.3 (10.4)**	**Type**: Anti-depressants only **Sample size:** 42 **Mean age (SD):** 41.3 (11.0) OR **Type:** Combined Intervention **Duration:** 10 sessions **Sample size:** 42 **Mean age (SD):** 42.6 (10.3)	HDRS

& Brown, 2015; Ward et al., 2021), four on Chinese American, two on the Latino population (Collado et al., 2014; Lopez-Maya et al., 2019), one on Mexican Americans (Schmaling & Hernandez, 2008), one on Vietnamese and Hispanic Americans (Diwan et al., 2023) and one study on Korean Americans (Cho et al., 2013). Two studies were based in the United Kingdom and focused on Pakistani women (Chaudhry et al., 2009; Gater et al., 2010). Two studies were based in Austria and focused on the Iranian population (Fathi et al., 2015, 2016).

Types of interventions

Six types of non-pharmacological interventions were identified: Cognitive Behavioral Therapy (CBT), Behavioral Activation (BA), Social group intervention, Mindfulness-based interventions, Logo-autobiography (LA) and Reminiscence therapy.

Cognitive Behavioral Therapy (CBT)

Four quantitative (Dai et al., 1999; Hwang et al., 2015; Ward & Brown, 2015; Ward et al., 2021), two mixed-methods (Fathi et al., 2015; Glueckauf et al., 2012) and one qualitative (Fathi et al., 2016) paper reported on CBT-based interventions. Three studies had a specific aim to culturally adapt CBT (Hwang et al., 2015; Ward & Brown, 2015; Ward et al., 2021). The intervention by Hwang et al. (2015) was delivered in the participants preferred language (Cantonese, Mandarin, or English). The intervention manuals were also translated and back-translated by a translation team and the Principal Investigator to ensure semantic, linguistic, and conceptual equivalence. CBT was culturally adapted to account for cultural complexities and beliefs about mental health, including the expression and communication of distress. Further adaptations included the integration of cultural metaphors and symbols, using cultural and philosophical teachings, understanding cultural differences in communication, and addressing culturally salient issues.

Interventions by Ward and Brown (2015) and Ward et al. (2021) were delivered in English but culturally adapted the intervention in various ways. This included developing the intervention based on the concept of the Nguzo Saba, a Swahili term which translates to the Seven Principles. The Nguzo Saba was originally developed to reinforce aspects of African cultures such as community, heritage, and family support. One of the principles includes faith, which the study reports as being a coping strategy for depression by some participants. Further adaptions included ensuring language is culturally appropriate, ethnic matching of client-therapist, and use of metaphors consistent with the African American culture.

Whilst the remaining four studies did not specifically have an aim of cultural adaptation, elements of adaption to meet the needs of the target population were present. Two studies (Dai et al., 1999; Fathi et al., 2015) translated intervention materials and delivered the intervention in the preferred language. A follow-up qualitative study (Fathi et al., 2016) was conducted to understand participants' experiences of taking part in the intervention. Participants expressed reasons for taking part and staying in the intervention, which included meeting women from the same culture, being in a non-judgmental space, and being able to speak about negative feelings, including loneliness, and fears. Other facilitators included learning productive strategies to manage depression and completing homework which was deemed useful. Fathi et al. (2016) identified participants with a positive or negative approach to the intervention and what this meant post-recovery. Participants with a positive approach from the onset were more engaged during the intervention and continued to implement what they learnt post-intervention. This included continued knowledge-seeking around depression to reduce the risk of relapse. Participants with a negative attitude reported that the intervention did not meet their expectations or needs. Nevertheless, participants still reported benefits during the intervention but were less motivated to implement what they learnt post-intervention. The study reported 70% of participants had a negative approach to the intervention.

Glueckauf et al. (2012) adapted key CBT strategies using photos and case scenarios of African American individuals. The intervention included goal setting, which participants reported as contributing to the management of their stress and learning to put their own needs first. A group setting was received positively as participants reported the benefits of learning from shared experiences. In terms of recruitment and raising awareness of the intervention, religious and faith groups were involved, which helped reduce the stigma of depression and improve uptake. The title of the intervention was also adapted based on a 'can do' attitude, thus framing the intervention as positive rather than negative.

Behavioral activation (BA)

Four studies tested interventions based on BA (Ciccolo et al., 2022; Collado et al., 2014; Gitlin et al., 2013; Schmaling & Hernandez, 2008). In terms of cultural adaptations, Collado et al. (2014) translated the intervention and materials into the preferred language. Ciccolo et al. (2022) adapted the content of their intervention to the local context of the target population. The content remained flexible. Some topics, if deemed important to participants, were developed during the delivery of the intervention rather than being pre-determined (e.g., wellness during incarceration, resiliency following incarceration, history of LGBTQ social justice, and history of African American activism). Schmaling and Hernandez (2008) found a greater decrease in depressive symptoms in participants who took part in four or more sessions of BA, compared to those who took part in less. Thus, indicating the importance of attending a minimum number of sessions to experience greater benefit from the intervention.

Gitlin et al. (2013) focused on the recruitment strategy to ensure greater uptake of the intervention. This included working with the community to choose the type of intervention (BA) based on the preferred coping strategy of the target group. The community also chose the name of the intervention to reflect their language use. This co-production strategy ensures that the intervention is developed *with* the target population, as opposed to *for* them.

Social group interventions

Two studies reported on one social group intervention, an initial pre-post-test design study by Chaudhry et al. (2009) and a mixed-methods RCT by Gater et al. (2010). The social group intervention addressed social difficulties, social isolation and poor access to primary care services. This was achieved via psychoeducation, indoor group activities such as yoga, exercise and personal grooming. Outdoor activities included shopping and visiting museums. Cultural considerations included travel and attendance through the provision of a free pick and drop taxi service accompanied by female Urdu speaking transport facilitators. A culturally acceptable venue was chosen, the local Pakistani community center, where social events are arranged regularly. Materials were read out to participants with limited literacy levels via multi-lingual facilitators. These factors facilitated attendance and uptake of the intervention. Barriers to attending the intervention included resistance from family members, depression not being recognized as an illness within the community and worries about confidentiality. Overall, women reported positive feelings after the intervention and suggested that family and friends also noticed a change in their mood.

Mind-body interventions

Four quantitative studies (Burnett-Zeigler et al., 2016; Lopez-Maya et al., 2019; Yeung et al., 2013, 2014), one mixed-methods study (Hong et al., 2023) and one qualitative study (Burnett-Zeigler et al., 2019) reported on Mind-Body based interventions. Three studies (Burnett-Zeigler et al., 2016; Yeung et al., 2013, 2014) stated that the interventions were culturally relevant, however the studies did not outline what made the intervention culturally relevant. Hong et al. (2023) adapted their intervention to fit in with the local context of African American women. This included shortened length of sessions to accommodate women with time constraints. The surface content of the intervention was modified to be culturally relevant, such as using images and poetry of African American women and by African American women. Lopez-Maya et al. (2019) translated and delivered the intervention in the participants preferred language.

The type of Mind-Body interventions varied across studies. The interventions by Burnett-Zeigler et al. (2016) and Hong et al. (2023) were based on the principles of Mind Body Stress Reduction, which includes meditation, body scan and yoga. A similar but slightly different approach was used by Lopez-Maya et al. (2019), with the Mindful Awareness Practices for Daily living Program. This intervention was based on mindful sitting meditation, mindful eating, appreciation meditation, friendly or loving-kindness meditation, mindful walking, and mindful movement. The mind-body intervention by Yeung et al. (2013) was based on Qigong, a type of exercise that incorporates coordinated body postures, meditation, and breathing to reach a deeply focused and relaxed state. Qigong involves slow and gentle movements, making it suitable for people of all ages and abilities. Yeung et al. (2014) developed their intervention based on Relaxation Response, a concept the authors believe to be central to many mind-body techniques. Techniques to reach this state include muscle relaxation, breathing techniques, yoga, focused awareness, open monitoring meditation and imagery. These variations indicate flexibility of mind-body interventions to suit the needs of the target population.

The qualitative study by Burnett-Zeigler et al. (2019) explored the acceptability of a mindfulness intervention for depressive symptoms among African-American women in a community health center. The intervention was found to be acceptable, reduced stress and improved coping and functioning. Reported benefits of the intervention included having greater control over thoughts, emotions and behaviors. Participants experienced an enhanced sense of awareness and focus, reporting a reduction in distracting thoughts and wandering minds. An increased ability to be present in the moment was reported as a result of actively noticing emotions and thoughts. An increased awareness during participation in daily activities was reported such as showering and driving. Increased awareness also benefited interpersonal communications. Overall, participants reported improvement in identifying stressors, communicating effectively, and feeling calmer and relaxed. The qualitative aspect of Hong et al. (2023) provided insight into stigma as a barrier to help-seeking and treatment uptake. Some participants were reluctant to identify as 'depressed' even when they met the diagnostic criteria, as they perceived depression only in extreme ways, such as feeling suicidal. Participants associated depression with being unstable and out of control. This highlights the importance of co-producing interventions with the target population, from naming the intervention to the content and delivery to ensure it addresses barriers such as perceived self and public stigma.

Logo-Autobiography (LA) intervention

One study (Cho et al., 2013) used Logo-autobiography (LA), which emphasizes the cognitive changes that have taken place in an individual's life. The intervention was culturally adapted to focus on issues pertaining to life before and after migration. The aim of the therapy is to guide participants to self-reflect, self-describe and self-analyse, in order to search for their meaning of life.

Reminiscence therapy (RT)

One study (Diwan et al., 2023) culturally adapted RT, a story-telling type of intervention which encourages older adults to remember and narrate events from their past, which evoke positive feelings to help improve mood. Cultural adaptations included involving family participation to increase social connectedness. In terms of recruitment and engagement, the researchers went to places where older people from that community were likely to attend (community center, health clinic, library, senior living). The intervention was delivered in the participants preferred language. As this intervention was based on two distinct groups, Vietnamese and Spanish, examples and materials were adapted accordingly. Qualitative data indicated that participants enjoyed RT, reporting that it made them feel closer to their community, sharing stories, and learning from each other's experiences. Participants felt more confident socializing and reported feeling good after sessions. Participants and service providers were culturally matched, and participants felt that their cultural traditions were understood as a result of this. Regardless of ethnic matching, key characteristics deemed to enhance the storytelling experience included the character of the facilitator, their professional competence, and relational skills.

Discussion

This scoping review has found that a range of non-pharmacological interventions have been applied alongside mid-to-older age ME adults with depression. Whilst variation existed in terms of the study designs, outcome measures, and type of intervention, overall, participants reported experiencing benefits from the reported interventions, such as improvement in mood and increased social connectedness. The most used intervention for

ME populations was found to be CBT, followed by Mind-Body and BA. These results align with current NICE (2022) guidelines which recommend CBT, BA, and mindfulness-based interventions for the treatment of depression. The literature also suggests CBT to be commonly selected for cultural adaptation (Anik et al., 2021). One of the reasons why CBT might be most popular is its flexibility in terms of format and delivery. Based on the participants' preferences, group and individual CBT are available, as well as remote and face-to-face versions, with all versions demonstrating effectiveness in reducing depression (Glueckauf et al., 2012). However, CBT requires trained professionals to deliver the intervention. As identified in this review, interventions such as BA can be delivered by trained non-professionals, adding flexibility to the design, potential cost and delivery of BA interventions. Existing literature has demonstrated BA to also be suitable for cultural adaptions to meet the needs of diverse populations (Mir et al., 2015).

In this review, studies that culturally adapted an intervention demonstrated a greater reduction in depression compared to non-culturally adapted interventions (Hong et al., 2023; Ward & Brown, 2015; Ward et al., 2021). This indicates a need for more culturally adapted interventions as they have the potential to increase accessibility to treatment, improve acceptability, feasibility, and treatment adherence, leading to overall better treatment outcomes. The main themes around cultural considerations found in this review included adapting the intervention to the local context, which includes covering salient issues for the target community such as stigma and migrant experiences. Other forms of cultural adaptations included translation of materials, delivery of the intervention in the preferred language and practical considerations such as when and where the intervention should be delivered. Interventions that had elements of co-production demonstrated greater uptake and engagement (Hong et al., 2023). Co-design is recommended by NICE (2016) guidelines for community engagement in health and wellbeing interventions.

This review found a paucity of interventions for depression in mid-to-older ME populations in the UK. Whilst CBT was found to be the most popular intervention in this review, this was typically across the USA. In the UK however, only one type of intervention for mid-to-older age ME adults has been tested, a social group intervention for women only. Compared to the other interventions in this review, this social group intervention did not display greater effectiveness in reducing depression as a standalone treatment (Gater et al., 2010). This might be explained by methodological issues such as a small sample size but may also encompass a lack of understanding of population needs. Subsequently, this review has highlighted a lack of studies recruiting mid-to-older age people from ME backgrounds for non-pharmacological interventions for depression.

Future studies should have a greater focus on recruiting people from mid-to-older age, ME backgrounds to reduce health inequalities and promote healthy aging, via outreach and co-production methods. Older age individuals show lower uptake of mental health services, and ME populations regardless of age experience barriers to accessing mental health services such as Talking Therapies (Arundell et al., 2024; Bansal et al., 2022; Prosser et al., 2024). According to the 2021 census, across England and Wales, the largest ME group comprises of Asian ethnic group at 9%, followed by Black ethnic group at 4%. This review highlighted that very little is known about depression treatment effects for mid-older age adults of ME background in the UK. For over 50 years ethnic inequalities in mental health care have existed and continue to exist (Bansal et al., 2022). Furthermore, whilst it may be convenient to group populations under umbrella terms such as 'South Asian' or 'African Caribbean', these ethnic groups are not homogenous as variation exists in terms of cultural practices, religious background, socio-historical contexts, and language. It is important for future interventions to consider cultural similarities and differences when designing and delivering culturally adapted interventions for depression.

The availability of culturally appropriate and effective non-pharmacological depression interventions for mid-to-older age ME populations is also a vital preventative measure. Approximately 40% of people experiencing depression also experience cognitive deficits (Mokhtari et al., 2023), in some cases, cognitive deficits symptoms persist even after remission (Semkovska et al., 2019). This can reduce overall quality of life as psychosocial and occupational functioning is negatively impacted (Akhtar et al., 2024; Crowe, 2017; Fehnel et al., 2016). This highlights the importance of measuring cognition as an outcome of functional recovery alongside a reduction in depression for symptomatic recovery. Whilst this review did not aim to capture depression interventions that aimed to improve cognition, none of the studies measured cognition as an outcome as standard. Typically, depression interventions that target cognition are usually based on cognitive remediation, training, and rehabilitation. A recent systematic review and meta-analysis of fifteen studies by Mokhtari et al. (2023) found cognitive rehabilitation to be an effective intervention for executive function, verbal learning, and working memory of people with depression. This highlights the importance of targeting cognitive symptoms as part of the treatment of depression. These types of interventions were not found in this review.

Despite the growing recognition of the clinical and functional importance of cognitive deficits in depression, UK clinicians were found to lack awareness of cognitive deficits in depression and barriers to assessment included lack of objective measures (McAllister-Williams et al., 2017). In the absence of tools specifically developed for screening cognitive deficits in depression, clinicians may rely on tools originally developed for mild cognitive impairment or dementia. This includes tools such as The Brief Cognitive Assessment Tool (Mansbach et al., 2012), Rowland Universal Dementia Assessment Scale (RUDAS) and the Montreal Cognitive Assessment (MoCA). These tools have not been validated for screening cognitive deficits in depression. To address this gap, The THINC-integrated tool was developed by McIntyre et al. (2017), which combines subjective and objective measures. The tool was found to be valid and sensitive for use in adults with depression and was reported as quick and easy to use. Validation studies of this tool for use in ME groups is required.

The findings of the current review have highlighted commonly utilitsed and acceptable non-pharmacological interventions for depression in ME groups. Mind-body interventions were found to contribute toward clarity in thinking and an overall sense of feeling calm. Adapting these interventions to include cognitive remediation strategies to improve attention, memory and concentration could support functional outcomes for people with depression, reducing the risk of relapse.

Limitations

A limitation of this review is that we focused only on depression, excluding physical and mental health co-morbidities. It is acknowledged that depression may co-exist with other conditions, which can influence how depression is presented, the type of support required and the effectiveness of this support. Thus, the findings of this review may not be applicable to more complex, multi-morbid cases of depression. This review was interested in the mid-older ME population, defined as 40 years and over. We were reliant on studies reporting the average age range. It is possible that eligible studies that did not clearly state the average age of participants were missed. A further limitation is that only 10% of studies were double screened. Whilst we are confident that we refined the screening process to ensure robustness prior to switching to single screening, there is a possibility of error. We also only included studies published in the English language only due to resource limitations.

Conclusions

This review indicates a need for non-pharmacological interventions for depression in ME populations in the UK. A greater focus is required on recruiting people of ME backgrounds over the age of 40 for randomized controlled trials. This is an under-represented group both in research and within mental health services. It is recommended that non-pharmacological interventions for depression are culturally adapted and co-produced with the target population. Cognitive deficits in depression are common but overlooked, it is recommended that assessment of cognition is made part of treatment. This will identify areas of need to support functional recovery of depression, to reduce the risk of relapse, and potentially prevent long-term conditions such as dementia.

Disclosure statement

No potential conflict of interest was reported by the author(s).

Funding

This report is independent research funded by the National Institute for Health Care Research, Yorkshire and Humber Applied Research Collaborations [NIHR200166]. The views expressed are those of the authors and not necessarily those of the funders, NHS, or the Department of Health and Social Care.

ORCID

Amirah Akhtar http://orcid.org/0000-0001-7371-5777

References

Akhtar, A., Shafiq, S., Parveen, S., Nwofe, E., & Windle, K. (2024). Exploring the impact of cognitive dysfunction during recurrent depression in a sample of mid-to-older age British South Asians: A qualitative study. *Journal of Psychiatric and Mental Health Nursing*. https://doi.org/10.1111/jpm.13113

Anik, E., West, R. M., Cardno, A. G., & Mir, G. (2021). Culturally adapted psychotherapies for depressed adults: A systematic review and meta-analysis. *Journal of Affective Disorders*, *278*, 296–310. https://doi.org/10.1016/j.jad.2020.09.051

Arundell, L.-L., Barnett, P., Buckman, J. E., Saunders, R., & Pilling, S. (2021). The effectiveness of adapted psychological interventions for people from ethnic minority groups: A systematic review and conceptual typology. *Clinical Psychology Review*, *88*, 102063. https://doi.org/10.1016/j.cpr.2021.102063

Arundell, L.-L., Saunders, R., Barnett, P., Leibowitz, J., Buckman, J. E., & Pilling, S. (2024). Exploring perspectives on how to improve psychological treatment for women from minoritised ethnic communities: A qualitative study with service users. *The International Journal of Social Psychiatry*, *70*(8), 1481–1494. https://doi.org/10.1177/00207640241270800

Bansal, N., Karlsen, S., Sashidharan, S. P., Cohen, R., Chew-Graham, C. A., & Malpass, A. (2022). Understanding ethnic inequalities in mental healthcare in the UK: A meta-ethnography. *PLoS Medicine*, *19*(12), e1004139. https://doi.org/10.1371/journal.pmed.1004139

Bellón, J. Á., Conejo-Cerón, S., Sánchez-Calderón, A., Rodríguez-Martín, B., Bellón, D., Rodríguez-Sánchez, E., Mendive, J. M., Ara, I., & Moreno-Peral, P. (2021). Effectiveness of exercise-based interventions in reducing depressive symptoms in people without clinical depression: Systematic review and meta-analysis of randomised controlled trials. *The British Journal of Psychiatry*, *219*(5), 578–587. https://doi.org/10.1192/bjp.2021.5

Birtel, M. D., & Mitchell, B. L. (2023). Cross-cultural differences in depression between White British and South Asians: Causal attributions, stigma by association, discriminatory potential. *Psychology and Psychotherapy*, *96*(1), 101–116. https://doi.org/10.1111/papt.12428

Burnett-Zeigler, I., Satyshur, M. D., Hong, S., Wisner, K. L., & Moskowitz, J. (2019). Acceptability of a mindfulness intervention for depressive symptoms among African-American women in a community health center: A qualitative study. *Complementary Therapies in Medicine*, *45*, 19–24. https://doi.org/10.1016/j.ctim.2019.05.012

Burnett-Zeigler, I. E., Satyshur, M. D., Hong, S., Yang, A., Moskowitz, J. T., & Wisner, K. L. (2016). Mindfulness based stress reduction adapted for depressed disadvantaged women in an urban Federally Qualified Health Center. *Complementary Therapies in Clinical Practice*, *25*, 59–67. https://doi.org/10.1016/j.ctcp.2016.08.007

Chaudhry, N., Waheed, W., Husain, N., Bhatti, S., & Creed, F. (2009). Development and pilot testing of a social intervention for depressed women of Pakistani family origin in the UK. *Journal of Mental Health*, *18*(6), 504–509. https://doi.org/10.3109/09638230902968209

Cho, S., Bernstein, K. S., Roh, S., & Chen, D. C. (2013). Logo-autobiography and its effectiveness on depressed Korean immigrant women. *Journal of Transcultural Nursing*, *24*(1), 33–42. https://doi.org/10.1177/1043659612452005

Ciccolo, J. T., Louie, M. E., SantaBarbara, N. J., Webster, C. T., Whitworth, J. W., Nosrat, S., Chrastek, M., Dunsiger, S. I., Carey, M. P., & Busch, A. M. (2022). Resistance training for Black men with depressive symptoms: A pilot randomized controlled trial to assess acceptability, feasibility, and preliminary efficacy. *BMC Psychiatry*, *22*(1), 283. https://doi.org/10.1186/s12888-022-03935-x

Collado, A., Castillo, S. D., Maero, F., Lejuez, C., & MacPherson, L. (2014). Pilot of the brief behavioral activation treatment for depression in Latinos with limited English proficiency: Preliminary evaluation of efficacy and acceptability. *Behavior Therapy*, *45*(1), 102–115. https://doi.org/10.1016/j.beth.2013.10.001

Crowe, M. (2017). *Recovery and mood disorders* (Vol. *24*, pp. 561–562). Wiley Online Library. https://doi.org/10.1111/jpm.12418

Crowe, M., Porter, R., Douglas, K., Inder, M., Lacey, C., Jordan, J., & Wells, H. (2020). Patients' experiences of cognitive functioning in recurrent depression: A qualitative study. *Journal of Psychiatric and Mental Health Nursing*, *27*(4), 321–329. https://doi.org/10.1111/jpm.12603

Dai, Y., Zhang, S., Yamamoto, J., Ao, M., Belin, T. R., Cheung, F., & Hifumi, S. S. (1999). Cognitive behavioral therapy of minor depressive symptoms in elderly Chinese Americans: A pilot study. *Community Mental Health Journal*, *35*(6), 537–542. https://doi.org/10.1023/a:1018763302198

de Jonge, M., Bockting, C. L., van Oppen, P., Van, H. L., Peen, J., Kikkert, M. J., & Dekker, J. J. (2018). The association between the number of previous episodes and modifiable vulnerability factors in remitted patients with recurrent depression. *PloS One*, *13*(11), e0206495. https://doi.org/10.1371/journal.pone.0206495

de la Torre, J. A., Vilagut, G., Ronaldson, A., Dregan, A., Ricci-Cabello, I., Hatch, S. L., Serrano-Blanco, A., Valderas, J. M., Hotopf, M., & Alonso, J. (2021). Prevalence and age patterns of depression in the United Kingdom. A population-based study. *Journal of Affective Disorders*, *279*, 164–172. https://doi.org/10.1016/j.jad.2020.09.129

Diwan, S., Eliazar, A., Pham, D., & Fuentes, M. (2023). Evaluation of a culturally adapted reminiscence therapy intervention: Improving mood, family and community connectedness in Spanish-and Vietnamese-speaking older adults. *Transcultural Psychiatry*, *60*(6), 973–984. https://doi.org/10.1177/13634615231191996

Fathi, A., Renner, W., & Juen, B. (2015). Group based cognitive behavioral therapy for depressed Iranian migrants in Austria. *International Journal of Psychological Studies*, *7*(2), 88. https://doi.org/10.5539/ijps.v7n2p88

Fathi, A., Renner, W., & Juen, B. (2016). A qualitative study of cognitive-behavioral therapy for Iranian migrants with mild/moderate depression in Austria. *Bulletin of the Menninger Clinic*, *80*(2), 166–186. https://doi.org/10.1521/bumc.2016.80.2.166

Fehnel, S. E., Forsyth, B. H., DiBenedetti, D. B., Danchenko, N., François, C., & Brevig, T. (2016). Patient-centered assessment of cognitive symptoms of depression. *CNS Spectrums*, *21*(1), 43–52. https://doi.org/10.1017/S1092852913000643

Fournier, J. C., Forand, N. R., Wang, Z., Li, Z., Iyengar, S., DeRubeis, R. J., Shelton, R., Amsterdam, J., Jarrett, R. B., Vittengl, J. R., Segal, Z., Dimidjian, S., Shea, M. T., Dobson, K. S., & Hollon, S. D. (2022). Initial severity and depressive relapse in cognitive behavioral therapy and antidepressant medications: An individual patient data meta-analysis. *Cognitive Therapy and Research*, *46*(3), 517–531. https://doi.org/10.1007/s10608-021-10281-x

Fuentes, D., & Aranda, M. P. (2012). Depression interventions among racial and ethnic minority older adults: A systematic review across 20 years. *The American Journal of Geriatric Psychiatry*, *20*(11), 915–931. https://doi.org/10.1097/JGP.0b013e31825d091a

Gater, R., Waheed, W., Husain, N., Tomenson, B., Aseem, S., & Creed, F. (2010). Social intervention for British Pakistani women with depression: Randomised controlled trial. *The British Journal of Psychiatry: The Journal of Mental Science*, *197*(3), 227–233. https://doi.org/10.1192/bjp.bp.109.066845

Gitlin, L. N., Harris, L. F., McCoy, M. C., Chernett, N. L., Pizzi, L. T., Jutkowitz, E., Hess, E., & Hauck, W. W. (2013). A home-based intervention to reduce depressive symptoms and improve quality of life in older African Americans: A randomized trial. *Annals of Internal Medicine*, *159*(4), 243–252. https://doi.org/10.7326/0003-4819-159-4-201308200-00005

Givens, J. L., Houston, T. K., Van Voorhees, B. W., Ford, D. E., & Cooper, L. A. (2007). Ethnicity and preferences for depression treatment. *General Hospital Psychiatry*, *29*(3), 182–191. https://doi.org/10.1016/j.genhosppsych.2006.11.002

Glueckauf, R. L., Davis, W. S., Willis, F., Sharma, D., Gustafson, D. J., Hayes, J., Stutzman, M., Proctor, J., Kazmer, M. M., Murray, L., Shipman, J., McIntyre, V., Wesley, L., Schettini, G., Xu, J., Parfitt, F., Graff-Radford, N., Baxter, C., Burnett, K., … Springer, J. (2012). Telephone-based, cognitive-behavioral therapy for African American dementia caregivers with depression: Initial findings. *Rehabilitation Psychology*, *57*(2), 124–139. https://doi.org/10.1037/a0028688

Hackett, R. A., Ronaldson, A., Bhui, K., Steptoe, A., & Jackson, S. E. (2020). Racial discrimination and health: A prospective study of ethnic minorities in the United Kingdom. *BMC Public Health*, *20*(1), 1652. https://doi.org/10.1186/s12889-020-09792-1

Harwood, H., Rhead, R., Chui, Z., Bakolis, I., Connor, L., Gazard, B., Hall, J., MacCrimmon, S., Rimes, K. A., Woodhead, C., & Hatch, S. L. (2023). Variations by ethnicity in referral and treatment pathways for IAPT service users in South London. *Psychological Medicine*, *53*(3), 1084–1095. https://doi.org/10.1017/S0033291721002518

HM Government. (2023). *Ethnicity facts and figures: Population of England and Wales 2022*. https://www.ethnicity-facts-figures.service.gov.uk/uk-population-by-ethnicity/national-and-regional-populations/population-of-england-and-wales/latest/

Holvast, F., Massoudi, B., Oude Voshaar, R. C., & Verhaak, P. F. (2017). Non-pharmacological treatment for depressed older patients in primary care: A systematic review and meta-analysis. *PloS One*, *12*(9), e0184666. https://doi.org/10.1371/journal.pone.0184666

Hong, S., Satyshur, M. D., & Burnett-Zeigler, I. (2023). The association of mindfulness and depression stigma among African American women participants in a mindfulness-based intervention: A pilot study. *Transcultural Psychiatry*, *60*(2), 244–254. https://doi.org/10.1177/13634615221076709

Hwang, W.-C., Myers, H. F., Chiu, E., Mak, E., Butner, J. E., Fujimoto, K., Wood, J. J., & Miranda, J. (2015). Culturally adapted cognitive-behavioral therapy for Chinese Americans with depression: A randomized controlled trial. *Psychiatric Services*, *66*(10), 1035–1042. https://doi.org/10.1176/appi.ps.201400358

Iturralde, E., Hsiao, C. A., Nkemere, L., Kubo, A., Sterling, S. A., Flanagan, T., & Avalos, L. A. (2021). Engagement in perinatal depression treatment: A qualitative study of barriers across and within racial/ethnic groups. *BMC Pregnancy and Childbirth*, *21*(1), 512. https://doi.org/10.1186/s12884-021-03969-1

James, S. L., Abate, D., Abate, K. H., Abay, S. M., Abbafati, C., Abbasi, N., Abbastabar, H., Abd-Allah, F., Abdela, J., Abdelalim, A., Abdollahpour, I., Abdulkader, R. S., Abebe, Z., Abera, S. F., Abil, O. Z., Abraha, H. N., Abu-Raddad, L. J., Abu-Rmeileh, N. M. E., Accrombessi, M. M. K., … Murray, C. J. L. (2018). Global, regional, and national incidence, prevalence, and years lived with disability for 354 diseases and injuries for 195 countries and territories, 1990–2017: A systematic analysis for the Global Burden of Disease Study 2017. *The Lancet*, *392*(10159), 1789–1858. https://doi.org/10.1016/S0140-6736(18)32279-7

Karasz, A., Gany, F., Escobar, J., Flores, C., Prasad, L., Inman, A., Kalasapudi, V., Kosi, R., Murthy, M., Leng, J., & Diwan, S. (2019). Mental health and stress among South Asians. *Journal of Immigrant and Minority Health*, *21*(Suppl 1), 7–14. https://doi.org/10.1007/s10903-016-0501-4

Kyu, H. H., Abate, D., Abate, K. H., Abay, S. M., Abbafati, C., Abbasi, N., Abbastabar, H., Abd-Allah, F., Abdela, J., Abdelalim, A., Abdollahpour, I., Abdulkader, R. S., Abebe, M., Abebe, Z., Abil, O. Z., Aboyans, V., Abrham, A. R., Abu-Raddad, L. J., Abu-Rmeileh, N. M. E., … Murray, C. J. L. (2018). Global, regional, and national disability-adjusted life-years (DALYs) for 359 diseases and injuries and healthy life expectancy (HALE) for 195 countries and territories, 1990–2017: A systematic analysis for the Global Burden of Disease Study 2017. *The Lancet*, *392*(10159), 1859–1922. https://doi.org/10.1016/S0140-6736(18)32335-3

Livingston, G., Huntley, J., Liu, K. Y., Costafreda, S. G., Selbæk, G., Alladi, S., Ames, D., Banerjee, S., Burns, A., Brayne, C., Fox, N. C., Ferri, C. P., Gitlin, L. N., Howard, R., Kales, H. C., Kivimäki, M., Larson, E. B., Nakasujja, N., Rockwood, K., … Mukadam, N. (2024). Dementia prevention, intervention, and care: 2024 report of the Lancet standing Commission. *Lancet*, *404*(10452), 572–628. https://doi.org/10.1016/S0140-6736(24)01296-0

Lopez-Maya, E., Olmstead, R., & Irwin, M. R. (2019). Mindfulness meditation and improvement in depressive symptoms among Spanish-and English speaking adults: A randomized, controlled, comparative efficacy trial. *PloS One*, *14*(7), e0219425. https://doi.org/10.1371/journal.pone.0219425

Mansbach, W. E., MacDougall, E. E., & Rosenzweig, A. S. (2012). The Brief Cognitive Assessment Tool (BCAT): A new test emphasizing contextual memory, executive functions, attentional capacity, and the prediction of instrumental activities of daily living. *Journal of Clinical and Experimental Neuropsychology*, *34*(2), 183–194. https://doi.org/10.1080/13803395.2011.630649

McAllister-Williams, R. H., Bones, K., Goodwin, G. M., Harrison, J., Katona, C., Rasmussen, J., Strong, S., & Young, A. H. (2017). Analysing UK clinicians' understanding of cognitive symptoms in major depression: A survey of primary care physicians and psychiatrists. *Journal of Affective Disorders*, *207*, 346–352. https://doi.org/10.1016/j.jad.2016.09.036

McIntyre, R. S., Best, M. W., Bowie, C. R., Carmona, N. E., Cha, D. S., Lee, Y., Subramaniapillai, M., Mansur, R. B., Barry, H., Baune, B. T., Culpepper, L., Fossati, P., Greer, T. L., Harmer, C., Klag, E., Lam, R. W., Wittchen, H.-U., & Harrison, J. (2017). The THINC-integrated tool (THINC-it) screening assessment for cognitive dysfunction: Validation in patients with major depressive disorder. *The Journal of Clinical Psychiatry*, *78*(7), 873–881. https://doi.org/10.4088/JCP.16m11329

Mir, G., Meer, S., Cottrell, D., McMillan, D., House, A., & Kanter, J. W. (2015). Adapted behavioural activation for the treatment of depression in Muslims. *Journal of Affective Disorders*, *180*, 190–199. https://doi.org/10.1016/j.jad.2015.03.060

Mokhtari, S., Mokhtari, A., Bakizadeh, F., Moradi, A., & Shalbafan, M. (2023). Cognitive rehabilitation for improving cognitive functions and reducing the severity of depressive symptoms in adult patients with Major Depressive Disorder: A systematic review and meta-analysis of randomized controlled clinical trials. *BMC Psychiatry*, *23*(1), 77. https://doi.org/10.1186/s12888-023-04554-w

Nair, P., Bhanu, C., Frost, R., Buszewicz, M., & Walters, K. R. (2020). A systematic review of older adults' attitudes towards depression and its treatment. *The Gerontologist*, *60*(1), e93–e104. https://doi.org/10.1093/geront/gnz048

National Institute for Health and Care Excellent (NICE) (2016) Transition between inpatient mental health settings and community or care home settings. Available at 3. Co producing comprehensive care plans that meet people's changing needs | Tools and resources | Transition between inpatient mental health settings and community or care home settings | Guidance | NICE (Access 01/02/2025)

National Institute for Health and Care Excellence (NICE) (2022) Depression in adults: treatment and management. NG222. Available at Recommendations | Depression in adults: treatment and management | Guidance | NICE (Accessed 01/02/2025)

Peters, M. D., Marnie, C., Tricco, A. C., Pollock, D., Munn, Z., Alexander, L., McInerney, P., Godfrey, C. M., & Khalil, H. (2020). Updated methodological guidance for the conduct of scoping reviews. *JBI Evidence Synthesis*, *18*(10), 2119–2126. https://doi.org/10.11124/JBIES-20-00167

Pickett, Y. R., Bazelais, K. N., & Bruce, M. L. (2013). Late-life depression in older African Americans: A comprehensive review of epidemiological and clinical data. *International Journal of Geriatric Psychiatry*, *28*(9), 903–913. https://doi.org/10.1002/gps.3908

Platt, L., & Warwick, R. (2020). Are some ethnic groups more vulnerable to COVID-19 than others. *the Institute for fiscal studies* 2020–2021.

Prosser, R., Dosanjh, L., Jell, G., & Churchard, A. (2024). Which older adults do not opt-in to Talking Therapies and why? *The Cognitive Behaviour Therapist*, *17*, e16. https://doi.org/10.1017/S1754470X24000151

Proto, E., & Quintana-Domeque, C. (2021). COVID-19 and mental health deterioration by ethnicity and gender in the UK. *PloS One*, *16*(1), e0244419. https://doi.org/10.1371/journal.pone.0244419

Rafique, R., Anjum, A., & Raheem, S. S. (2019). Efficacy of Surah Al-Rehman in managing depression in Muslim women. *Journal of Religion and Health*, *58*(2), 516–526. https://doi.org/10.1007/s10943-017-0492-z

Recchia, F., Leung, C. K., Chin, E. C., Fong, D. Y., Montero, D., Cheng, C. P., Yau, S. Y., & Siu, P. M. (2022). Comparative effectiveness of exercise, antidepressants and their combination in treating non-severe depression: A systematic review and network meta-analysis of randomised controlled trials. *British Journal of Sports Medicine*, *56*(23), 1375–1380. https://doi.org/10.1136/bjsports-2022-105964

Santomauro, D. F., Mantilla Herrera, A. M., Shadid, J., Zheng, P., Ashbaugh, C., Pigott, D. M., Abbafati, C., Adolph, C., Amlag, J. O., Aravkin, A. Y., Bang-Jensen, B. L., Bertolacci, G. J., Bloom, S. S., Castellano, R., Castro, E., Chakrabarti, S., Chattopadhyay, J., Cogen, R. M., Collins, J. K., … Ferrari, A. J. (2021). Global prevalence and burden of depressive and anxiety disorders in 204 countries and territories in 2020 due to the COVID-19 pandemic. *The Lancet*, *398*(10312), 1700–1712. https://doi.org/10.1016/S0140-6736(21)02143-7

Schaakxs, R., Comijs, H. C., Lamers, F., Kok, R. M., Beekman, A. T. F., & Penninx, B. W. J. H. (2018). Associations between age and the course of major depressive disorder: a 2-year longitudinal cohort study. *The Lancet. Psychiatry*, *5*(7), 581–590. https://doi.org/10.1016/S2215-0366(18)30166-4

Schmaling, K. B., & Hernandez, D. V. (2008). Problem-solving treatment for depression among Mexican Americans in primary care. *Journal of Health Care for the Poor and Underserved*, *19*(2), 466–477. https://doi.org/10.1353/hpu.0.0032

Semkovska, M., Quinlivan, L., O'Grady, T., Johnson, R., Collins, A., O'Connor, J., Knittle, H., Ahern, E., & Gload, T. (2019). Cognitive function following a major depressive episode: A systematic review and meta-analysis. *The Lancet. Psychiatry*, *6*(10), 851–861. https://doi.org/10.1016/S2215-0366(19)30291-3

Serrano-Ripoll, M. J., Zamanillo-Campos, R., Fiol-DeRoque, M. A., Castro, A., & Ricci-Cabello, I. (2022). Impact of smartphone app–based psychological interventions for reducing depressive symptoms in people with depression: Systematic literature review and meta-analysis of randomized controlled trials. *JMIR mHealth and uHealth*, *10*(1), e29621. https://doi.org/10.2196/29621

Smith, S., Gilbert, S., Ariyo, K., Arundell, L.-L., Bhui, K., Das-Munshi, J., Hatch, S., & Lamb, N. (2020). Multidisciplinary research priorities for the COVID-19 pandemic. *The Lancet. Psychiatry*, *7*(7), e40. https://doi.org/10.1016/S2215-0366(20)30250-9

Ward, E. C., & Brown, R. L. (2015). A culturally adapted depression intervention for African American adults experiencing depression: Oh Happy Day. *The American Journal of Orthopsychiatry*, *85*(1), 11–22. https://doi.org/10.1037/ort0000027

Ward, E. C., Brown, R. L., Sullivan-Wade, L., & Sainvilma, S. (2021). A culturally adapted Depression intervention for African American adults: An efficacy trial. *WM*, *120*(4), 273–280.

Wiersema, C., Oude Voshaar, R. C., van den Brink, R. H., Wouters, H., Verhaak, P., Comijs, H. C., & Jeuring, H. W. (2022). Determinants and consequences of polypharmacy in patients with a depressive disorder in later life. *Acta Psychiatrica Scandinavica*, *146*(1), 85–97. https://doi.org/10.1111/acps.13435

Williams, E., Tillin, T., Richards, M., Tuson, C., Chaturvedi, N., Hughes, A., & Stewart, R. (2015). Depressive symptoms are doubled in older British South Asian and Black Caribbean people compared with Europeans: Associations with excess co-morbidity and socioeconomic disadvantage. *Psychological Medicine*, *45*(9), 1861–1871. https://doi.org/10.1017/S0033291714002967

Windle, E., Tee, H., Sabitova, A., Jovanovic, N., Priebe, S., & Carr, C. (2020). Association of patient treatment preference with dropout and clinical outcomes in adult psychosocial mental health interventions: A systematic review and meta-analysis. *JAMA Psychiatry*, *77*(3), 294–302. https://doi.org/10.1001/jamapsychiatry.2019.3750

Windle, K., Wagland, R., Forder, J. E., d'Amico, F., & Wistow, G. (2009). *National evaluation of partnerships for older people projects*. https://www.pssru.ac.uk/pub/rs053.pdf

World Health Organization. (2017). *Depression and other common mental disorders: Global health estimates*. WHO.

World Health Organization. (2022). *Strengthening primary health care to address racial discrimination, promote intercultural services and reduce health inequities*. WHO.

Yeung, A., Slipp, L. E., Jacquart, J., Fava, M., Denninger, J. W., Benson, H., & Fricchione, G. L. (2013). The treatment of depressed Chinese Americans using Qigong in a health care setting: A pilot study. *Evidence-Based Complementary and Alternative Medicine*, *2013*, 1–5. https://doi.org/10.1155/2013/168784

Yeung, A., Slipp, L. E., Niles, H., Jacquart, J., Chow, C.-L., Fava, M., Denninger, J. W., Benson, H., & Fricchione, G. L. (2014). Effectiveness of the relaxation response-based group intervention for treating depressed Chinese American immigrants: A pilot study. *International Journal of Environmental Research and Public Health*, *11*(9), 9186–9201. https://doi.org/10.3390/ijerph110909186