Behavioral Activation Therapy for Depression Led by Health Personnel in Older People: A Scoping Review

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Abstract

Behavioral activation therapy is presented as a promising psychological intervention to enhance depression management and related symptoms by increasing engagement in rewarding activities. This study reviews three research endeavors, including randomized controlled trials and a case study. Variability in intervention duration and training approaches is noted, although typically, eight sessions per week were conducted. Therapy components range from participating in pleasurable activities to ongoing support outside sessions. The process of evidence source selection relied on identifying 327 articles across four databases, with three selected for review, utilizing the PRISMA extension for scoping reviews. This ensured rigorous eligibility criteria and a structured methodology for data collection. Overall, these findings support the effectiveness and applicability of behavioral activation therapy in treating depression in older adults. Training non-specialized healthcare personnel would improve the overall quality of medical care and facilitate the dissemination of evidence-based therapies. This, in turn, could be crucial in closing the psychotherapeutic care gap that exists in low and middle-income countries.

Keywords

behavioral activation, older adults, depression, health personnel training, scoping review

What This Paper Adds

- Health Personnel-Led Interventions: The focus on health personnel-led interventions offers practical implications for healthcare systems working with older individuals experiencing depression. It sheds light on the crucial role of healthcare professionals in delivering effective therapy for this population.
- Identification of Research Gaps: Through the scoping review process, this article may highlight therapeutic components that enhance the replicability of a clinical intervention. This underscores the importance of identifying areas where further research is needed to strengthen the effectiveness of treatments for depression in older adults.
- Scoping Review Methodology: The use of a scoping review methodology in this study enriches methodological diversity in research approaches. It demonstrates how scoping reviews can be utilized to map existing evidence and identify gaps in knowledge, particularly in the context of treating depression in older adults.

Applications of Study Findings

- Practical Implications: The findings of this study have significant practical implications for healthcare practices related to managing depression in older adults. These findings could influence decision-making processes regarding the implementation of Behavioral Activation Therapy in clinical settings specifically tailored for this population.
- Implementation Strategies: Exploring strategies for successful implementation of Behavioral Activation Therapy in real-world healthcare

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settings catering to older adults. This could involve considerations such as training programs for healthcare professionals, integration into existing mental health services, and overcoming barriers to adoption and adherence.

Introduction

Depression is one of the most common mood disorders worldwide. According to the World Health Organization (WHO, 2023), depression affects approximately 3.8% of the world's population, including 5.7% of the adult population over 60 years of age.

According to the *Diagnostic and Statistical Manual of Mental Disorders*, fifth edition (DSM-5), depression is characterized by the presence of five or more symptoms during a 2-week period. It is imperative that one of these symptoms be a depressed mood or anhedonia (loss of interest or pleasure). Additional symptoms include changes in appetite or weight, difficulty sleeping (insomnia or hypersomnia), psychomotor agitation or retardation, fatigue, or loss of energy, decreased ability to think or concentrate, feelings of worthlessness or excessive guilt, and suicidal tendencies (American Psychiatric Association [APA], 2015).

In older adults, depression shows distinctive characteristics compared to the younger population. According to Pocklington (2017), a key difference is the perception of an "absence of feelings or emotions" during depressive episodes. Likewise, the psychological symptoms of depression are more frequent and prevalent than in young adults, including feelings of guilt, low motivation, loss of interest, anxiety symptoms, and suicidal thoughts. The presence of irritability and agitation is also highlighted (Fiske et al., 2009).

The prevalence of depression in old age has been recurrently linked to the presence of medical illnesses. Although various serious or chronic conditions can trigger depressive reactions, it has been highlighted that cardiac diseases, cerebrovascular diseases and neurological conditions are particularly associated with depression (Fiske et al., 2009; Liguori et al., 2018; Zhang et al., 2018). According to Boyle et al., (2010), depressive disorders increase the likelihood of developing dementia or cognitive disorder not otherwise specified in older adults receiving primary care.

Following the guidelines of the British Institute NICE (National Institute for Health and Care Excellence), several first-line treatments for depression stand out, such as guided self-help, group cognitive-behavioral therapy (CBT), group behavioral activation, individual CBT, individual behavioral activation, group physical exercise, group mindfulness and meditation, interpersonal psychotherapy and selective serotonin reuptake inhibitors (SSRIs), counseling, as well as short-term psychodynamic psychotherapy (NICE Guideline, 2022).

WHO (2019), through the guide on assessment and person-centered care schemes in primary health care, highlights the importance of the use of CBT, problem-solving therapy, behavioral activation therapy (BAT) and life review therapy in their care regimens to address depressive symptoms. It stands out that BAT is easier to learn than other psychotherapies, allowing non-specialized professionals to expand access to care for depressive symptoms in older adults.

Kanter et al. (2011), points out that BAT aims to increase people's contact with sources of reward, helping them to be more active and, thereby, improving their life context. BAT has been used in several trials with older adults, being a promising treatment to reduce symptoms of depression, social isolation, and even post-traumatic stress disorder (Acierno et al., 2012; Alexopoulos et al., 2017; Solomonov et al., 2019; Yon & Scogin, 2008). In a meta-analysis carried out by Orgeta et al. (2017), it is mentioned that BAT has demonstrated its evidence in reducing depressive symptoms in older adults, having medium to large effects in a few sessions (8–10 sessions on average).

Also, it has been observed that non-specialized professionals can acquire these skills, potentially helping to expand access to care, particularly for depressive symptoms (Anvari et al., 2023). Training healthcare personnel in BAT can have several advantages, that is, expanded access to care; reduced care gap; enhanced efficiency in primary care; flexibility in different care settings.

However, the development of BAT is usually understood according to various theoretical and implementation criteria, which make adequate replicability of the interventions impossible. Accordingly, the objective of the present scoping review focuses on identifying current research on BAT, focusing on the authors, year of publication, location of the study, characteristics of the studies, including their design and participants. The aim is to analyze aspects related to the theoretical model implemented, training and intervention, such as the trained public, characteristics of the trainers and trainees, therapeutic components, and number of sessions.

Methods

The scoping review were conducted using the PRISMA Extension for Scoping Review (PRISMA-ScR) published by Tricco et al. (2018).

Eligibility Criteria

Participants. Adults ≥65 years of age with a diagnosis of depression or depressive symptoms using a score more than 5 points on the Geriatric Depression Scale (GDS-15; Yesavage et al., 1982), more than 11 points on Beck Depression Inventory (BDI-II; Beck et al., 1996) or more than 9 points on the Patient Health Questionnaire (PHQ-9; Kroenke et al., 2001).

Exclusion Criteria. Results where the participants were not older adults (≥65 years) were excluded. Those elements where the main results were other than depression were eliminated, so articles in which the participants had a diagnosis of neurocognitive disorder, delirium, uncontrolled chronic diseases, hypothyroidism, people institutionalized in long-stay units and hospitalized were excluded. Finally, those articles whose original language was not English, or that were not peer-reviewed for publication, were eliminated.

Intervention

Behavioral Activation Therapy (BAT). BAT can be considered one of the therapies for depression with strong empirical support. The aim is to increase the patient's contact with sources of reward, helping them to be more active and, thereby, improving their life context through various techniques based on behavior modification. Some of the components have been identified and described by Kanter et al. (2010), particularly activity monitoring, assessment of life goals and values, activity scheduling, skills training, relaxation training, contingency management, procedures directed at verbal behavior, and procedures directed at avoidance.

BAT is understood through the brief behavioral activation therapy protocol of Lejuez et al. (2011), the programming of activities, self-control of activities as well as the various modifications to the protocols developed by Barraca and Pérez-Álvarez (2015), Jacobson et al. (1996), Kanter et al. (2011), or Martell et al. (2001).

Context. All configurations were considered and no geographic or time restrictions was applied. Original research articles (single case studies, cross-sectional, and longitudinal studies with or without comparison control group, RCT, RCT protocol or any other method).

Research Designs. This scoping review considered experimental and quasi-experimental study designs, including randomized controlled trials, nonrandomized controlled trials, before-and-after studies, and interrupted time series studies.

Information Sources

The initial search was conducted on March 2024 using four electronic databases: PsycINFO, access via OVID (Covering since 1950); MEDLINE, access via OVID (Covering since 1946); Cochrane Central Registry of Controlled Trials, access via OVID (Covering since 2006); Web of Science Core Collection, accessed via Clarivate Analytics (Covering since 1900). These were selected for their relevance in the field of mental health and behavioral sciences.

Search

Text words contained in the titles and abstracts of relevant articles, and index terms used to describe the articles were used to develop a comprehensive search strategy (see Supplemental Appendix I). The search strategy, including all identified keywords and indexed terms, was adapted for each database and/or information source included. The reference list of all included evidence sources was examined for further studies. The search strategy was not limited to a date range.

Selection of Sources of Evidence

All identified citations were collected and uploaded to Rayyan (Rayyan Systems Inc., Cambridge, MA, USA, available at www.rayyan.ai). Duplicates was removed. After a pilot test, two reviewers (EM and JS) screened the titles and abstracts to evaluate them. Potentially relevant sources were retrieved in full, and their citation details was imported into the Rayyan software. Two reviewers (EM and JS) evaluated in detail the full text of the selected citations according to the inclusion criteria. Reasons for exclusion of full text evidence sources that do not meet the inclusion criteria was recorded and reported in the scoping review. Disagreement between the evaluators at each stage of the selection process was resolved through discussion with the research group.

Data Charting Process

The charting data was conducted following the recommendations of Arksey and O'Malley (2005). Data was carried out in a database created ad hoc in Microsoft Excel, in which the authors contributed to the filling. The tables identify, through columns, author(s), year of publication, study location, intervention type, study population, outcomes measures, number of participants, who has been trained, duration of training, characteristics of the trainers and trainees, therapeutic components and number of sessions.

Synthesis of Results

A narrative report was conducted to summarize the extracted data of the following outcomes.

Results

Selection of Sources of Evidence

The search and retrieval of items was carried out by one of the authors (EM). Three hundred twenty-seven items from four databases were identified Duplicate items were removed ($n=29$). Items screened and eliminated ($n=290$). The Full-text assessment items were made by two authors (EM and JS), ($n=8$), finally, three items were included in the review.

Characteristics of Sources of Evidence

The review analyzed three studies conducted in the United States, the United Kingdom, and the Netherlands,

involving participants aged 65 years or older. These studies assessed depression using various standardized tools, including the Quick Inventory of Depressive Symptomatology (QIDS-SR16), the Patient Health Questionnaire (PHQ-9), and the Geriatric Depression Scale (GDS). Two studies were randomized controlled trials (RCTs), while one was a case study.

In the first RCT, Janssen et al. (2023) compared BAT to treatment as usual (TAU) among 161 participants with depression. The BAT group demonstrated a notable reduction in depressive symptoms, with a QIDS-SR16 difference of −2.77 (effect size = 0.90) after treatment. This improvement remained at 3 months (difference = −1.53, effect size = 0.50), though it was no longer significant at the 12-month follow-up. Similarly, Bosanquet et al. (2017) studied 485 participants and compared collaborative care with usual care. Collaborative care significantly improved depressive symptoms at 4 months (difference = 1.92 points, effect size = 0.34), though this benefit diminished over time and was not sustained at 12 or 18 months. However, collaborative care proved more cost-effective for individuals who attended six or more sessions.

Lastly, a case study by Meeks et al. (2006) tracked a patient undergoing a mental health intervention, observing increased participation in group activities and improvements in both positive and negative affect. These findings were supported by staff observations, adding a qualitative perspective to the quantitative outcomes observed in the RCTs.

With respect to the therapeutic components of BAT, the original protocol developed by Martell et al. (2011) highlights the theoretical alignment with other techniques based on operant conditioning, particularly through its focus on functional analysis. This allows for a detailed understanding of behavior in relation to its antecedents and consequences. Additionally, the principle of parsimony is evident in the "rescheduling of activities" approach, which offers straightforward interventions by restructuring daily routines to better meet the needs of older adults.

Furthermore, the scalability of BAT is demonstrated by the adaptation of manualized treatments specifically designed for older adults with cognitive impairments, focusing on enhancing cognitive abilities and equipping caregivers with effective strategies. These aspects emphasize the need for theoretical alignment, simplicity, and adaptability when designing and implementing BAT interventions for this population. As argued by Kanter et al. (2010), regardless of the specific techniques used, the central goal remains to activate behaviors that engage positive reinforcement.

Complete results can be found in Table 1.

Figure 1 presents a flow diagram with a report of the outcomes obtained in each phase.

Discussion

The findings from the scoping review underscore the efficacy and versatility of BAT as a treatment for depression in older adults, emphasizing its adaptability across various settings, including outpatient clinics, home environments, and residential care facilities. BAT has proven to be highly effective in promoting engagement in pleasurable and meaningful activities, which contributes to improved psychological well-being and mitigates the negative effects of functional limitations that are common in older age. Studies by Janssen et al. (2023) and Bosanquet et al. (2017) confirm BAT's significant short-term benefits in reducing depressive symptoms. However, these studies also highlight that while initial improvements are notable, the effects tend to wane over time, raising the question of how to sustain long-term efficacy. The case study by Meeks et al. (2006) further illustrates BAT's positive impact on increasing social participation and enhancing both positive and negative affect, a critical consideration for addressing the pervasive issue of social isolation in this demographic.

One of BAT key strengths is its simplicity and accessibility, allowing it to be implemented by non-specialized professionals, such as caregivers and occupational therapists. This feature broadens the therapy's reach, making it a feasible option in primary care settings and communities where access to specialized mental health services may be limited (Anvari et al., 2023). By tailoring interventions to the individual characteristics of older adults, including their comorbidities and cognitive abilities, BAT maximizes its effectiveness, enhancing its appeal as a practical therapeutic strategy. As Kanter et al. (2010) suggests, BAT works by activating behaviors that engage positive reinforcement, improving the overall life context of the patient.

The adaptability of BAT across various clinical and non-clinical settings is further demonstrated by its ability to be delivered in both short-term formats and in populations with cognitive impairments. However, the variability in implementation criteria across studies poses challenges for replicability, indicating a need for standardized protocols to ensure consistent outcomes. In particular, future research should focus on optimizing BAT for long-term maintenance by exploring the integration of booster sessions or supplementary therapies to sustain its positive effects over time.

In summary, BAT offers a promising, scalable, and cost-effective solution for addressing depression in older adults, with the potential to be widely implemented across diverse settings. By promoting social engagement and physical activity, BAT not only addresses the immediate symptoms of depression but also tackles the broader issues of social isolation and functional decline. Despite the need for more research to standardize and sustain its long-term efficacy, BAT remains a valuable tool for improving the mental health and quality of life in this vulnerable population.

Conclusions

BAT emerges as a promising treatment option for reducing depressive symptoms, social isolation, and

Table 1. Results of Individual Sources of Evidence.

| Author(s)	Year of publication	Study location	Design	Participants in CG	Characteristics of trainees	Duration of training	Therapeutic components	Number of sessions	Outcomes
Meeks et al.	2006	US	Case study	$n = 1$	Director of the activities department/experienced in long-term care woman.	3 hr	Adaptation from a manualized treatment for depression in cognitively impaired elders. Use of Increasing pleasant events and interactions, maximizing cognitive abilities, and teaching caregivers' strategies for behavior change and effective problem solving.	10	GDS; MMSE; SADS
Janssen et al.	2023	Netherlands	Pragmatic cluster-randomized controlled trial	$n = 96$	Mental health nurses	2 weeks	Original BA protocol of Martell et al. Functional analysis, activity registration, activity scheduling, and relapse prevention.	8	QIDS-SR16; PHQ-9.
Bosanquet et al.	2017	UK	Multicentred randomized controlled trial	$n = 249$	Case managers	2 days	Based on (Richards et al., 2008). Rescheduling of activities, "manipulate the behavioral consequence of a trigger," telephone support, medication management, symptom monitoring and active surveillance.	6	PHQ-9; GAD-7; PHQ-15; SF-12; EQ-5D-3L; Connor–Davidson Resilience Scale.
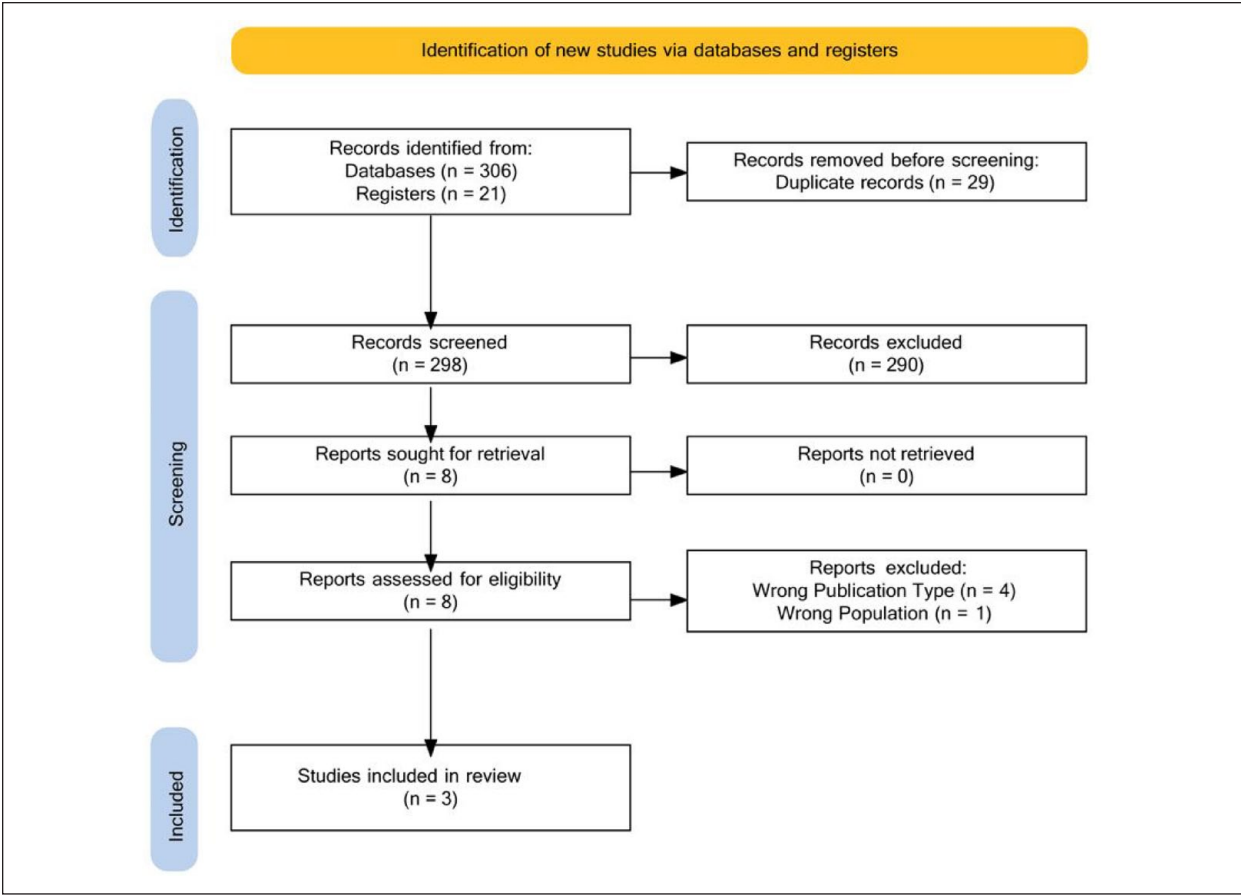
Figure 1. PRISMA flow diagram.

post-traumatic stress disorder in older adults. Its focus on increasing engagement in rewarding activities, structured scheduling, and problem-solving skills makes it a practical and accessible intervention for non-specialized professionals to deliver (Anvari et al., 2023). The therapy's demonstrated efficacy in reducing depressive symptoms, coupled with its potential for adaptation into brief sessions, underscores its relevance in expanding access to care for older adults with depression.

The training, ranging from 3 hr to 2 weeks in duration, is highlighted for its feasibility. This program can be implemented by adequately trained physicians in primary care, especially those working with older adults. The training was conducted by experts in the field, focusing on healthcare personnel who interact with older adults.

This review acknowledges the challenges involved in replicating interventions due to different theoretical and methodological criteria and highlights the need for further research to explore personalized interventions, long-term outcomes, comparative analysis with other therapies, and strategies for successful implementation in real-world healthcare settings.

Primarily addressing those criteria for adequate training, particularly when developing a first contact with healthcare personnel, their knowledge, and expectations prior to training, this in turn can generate studies that lead to adequate acceptance and implementation of the intervention. On the other hand, it is necessary to evaluate the adherence to the treatment provided by healthcare personnel as well as those clinical skills for adequate care, management and communication with older adults.

Finally, it is worth mentioning that a problem regarding implementation, training, as well as the evaluation of possible therapeutic outcomes lies in the definition of BAT, an example lies in the definition proposed by the APA as: "an intervention that explicitly aims to increase an individual's engagement in valued life activities through guided goal setting to bring about improvements in thoughts, mood, and quality of life" (APA, 2018), however this implies a heterogeneity of components that can increase people's engagement with those valuable activities, for example, Problem-solving or Social skill training (Dimidjian et al., 2011), addressing these aspects, future studies can improve the understanding of the role of BAT in promoting mental health and well-being in older populations.

Declaration of Conflicting Interests

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Supplemental Material

Supplemental material for this article is available online.

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