

Memory workshops for groups of older adults: An integrative literature review

Oficinas de memória para grupos de pessoas idosas: revisão integrativa da literatura

Talleres de memoria para grupos de adultos mayores: una revisión integradora de la literatura

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Abstract

This study aimed to verify the benefits of group workshops for older people based on an integrative literature review. The articles were searched in the databases of PubMed, LILACS, and SciELO through the Virtual Health Library (VHL), published between 2016 and 2025, in Portuguese, English, and Spanish, without restrictions on location. The health science descriptors (elderly) and (memory) and (memory training) were used to select the studies. The review selected 12 articles, whose memory stimulation sessions took 60 to 120 minutes and lasted 4 to 24 weeks. The participants' ages ranged from 60 to 82 years; only one article addressed people over 80 years old. The predominant education level among older people in these studies was higher education. Cognitive training helps participants with cognitive functions, such as memory and attention, as well as executive functions and emotional benefits, such as increased confidence and self-esteem.

Keywords: Elderly; Memory; Cognitive training; Health Promotion.

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Authors' contributions:

JBC, EA, IVOA, AMAB: study conceptualization; methodology; data collection; manuscript draft.
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Resumo

O objetivo do trabalho é verificar os benefícios da realização das oficinas em grupo para a população idosa com base em revisão integrativa da literatura. A busca de artigos foi realizada nas bases de dados eletrônicas PubMed, LILACS e SciELO no período compreendido entre 2016 e 2025. As buscas em LILACS e SciELO foram realizadas por meio da Biblioteca Virtual em Saúde (BVS), sem restrição de localização, nos idiomas português, inglês e espanhol. Para a seleção dos estudos, foram utilizados os descritores em ciências da saúde: (elderly) and (memory) and (Memory training). Foram selecionados 12 artigos, os quais apresentaram que os encontros para estimulação da memória tiveram duração de quatro a 24 semanas, com o tempo de duração entre 60 e 120 minutos. A faixa etária das pessoas variou entre 60 e 82 anos, e somente um artigo abordou pessoas com idade acima de 80 anos. Nos estudos analisados, a escolaridade predominante entre as pessoas idosas era de nível superior. O treino cognitivo auxilia os participantes no que tange às funções cognitivas, como a memória e atenção, além das funções executivas e benefícios emocionais, como o aumento de confiança e autoestima.

Palavras-chave: Idoso; Memória; Treino cognitivo; Promoção da Saúde.

Resumen

El objetivo de este estudio es verificar los beneficios de la realización de talleres grupales para la población de edad avanzada con base en una revisión integradora de la literatura. La búsqueda de artículos se realizó en las bases de datos Scielo, Lilacs, Pubmed y BVS entre 2016 y 2025, sin restricciones de ubicación, en portugués, inglés y español. Se utilizaron los siguientes descriptores de ciencias de la salud para seleccionar los estudios: (ancianos) y (memoria) y (entrenamiento de memoria). Se seleccionaron doce artículos, entre los cuales las sesiones de estimulación de la memoria duraron de cuatro a 24 semanas, con una duración de 60 a 120 minutos. El rango de edad de los participantes varió de 60 a 82 años, y solo un artículo se dirigió a personas mayores de 80 años. En los estudios analizados, el nivel educativo predominante entre los adultos mayores fue la educación superior. El entrenamiento cognitivo ayuda a los participantes con funciones cognitivas, como la memoria y la atención, así como con funciones ejecutivas y beneficios emocionales como el aumento de la confianza y la autoestima.

Palabras-clave: Anciano; Memoria; Entrenamiento Cognitivo; Promoción de la Salud.

Introduction

Aging is a dynamic, progressive, irreversible process that affects all people, linked to biological, psychological, and social factors that vary from one individual to another. It is also multidirectional, as gains (growth) and losses (declines) are recorded, making those who maximize gains and minimize losses candidates for active aging¹.

The older population has been growing considerably, as evidenced in the World Population Prospects 2019 report by the United Nations (UN), which states that we are aging due to increased life expectancy and falling fertility and mortality rates. According to the document, by 2050, one in six people in the world will be over 65 years old (16%). Given this reality, we should think not about when we will age but how we will age².

Groups for older adults are collective actions, created in partnership with other social actors, in which the well-being provided by participation in group activities contributes to maintaining the biopsychosocial balance of individuals and to raising awareness about the importance of self-care, the space for speaking and listening, the reduction of afflictions, sociability, bonding, identification, and affection mobilization³.

These support groups work with human beings in their full maturity, establishing relationships by interacting with other participants in the group and the community, being rich tools for supporting older adults in numerous social aspects and beyond, such as cognitive stimulation through cognitive training and/or cognitive stimulation⁴.

Cognitive training through reading and practicing exercises can improve the cognitive functioning of older adults and contribute to maintaining a good quality of life and psychological well-being in old age. Memory exerts an important influence on autonomy and independence in daily life. Thus, memory interventions can help to promote their health⁵.

Cognition is the set of mental processes by which the brain acquires, processes, stores, and uses information, allowing the individual to perceive, learn, remember, and guide behavior. These processes involve different neural systems responsible for functions such as perception, memory, language, and decision-making. Executive functions, in turn, constitute a set of control

processes that organize and regulate goal-directed behavior, including planning, cognitive flexibility, and inhibitory control⁶.

Cognitive stimulation has been associated with the promotion of a healthy life, with benefits for mental health, providing pleasurable moments that stimulate interpersonal relationships, affectivity, and distraction⁷.

The literature presents various cognitive training protocols, which, however, are not standardized regarding the duration, frequency, and content of interventions. Such methodological differences make it difficult to compare studies and consolidate evidence on the effectiveness of these strategies⁸.

Health promotion has a fundamental role in this context by providing a welcoming space and (re)building or expanding the support network. Hence, this research aimed to verify the benefits of group workshops for older people, according to the available literature.

Methods

This integrative literature review followed the steps of Mendes, Silveira, and Galvão (2008)⁹, aiming to contribute to reflections on conducting integrative health reviews. Thus, this study was carried out in six stages, namely: (1) identifying the theme and selecting the hypothesis or research question for the review; (2) establishing inclusion and exclusion criteria for studies/sampling or literature search; (3) defining the information to be extracted from the selected studies/categorization of studies; (4) evaluating the studies included in the integrative review; (5) interpreting the results; and, finally, (6) presenting the review/synthesis of knowledge. The research question was, "What are the benefits of memory workshops for groups of older people?"

The review also followed the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses)¹⁰ recommendations, developing an adapted flowchart. Two independent researchers searched for scientific articles in the databases of PubMed, LILACS, and SciELO, encompassing the period from 2016 to 2025. The searches in LILACS and SciELO were conducted through the Virtual Health Library (VHL), without location restrictions, in Portuguese, English, and Spanish.

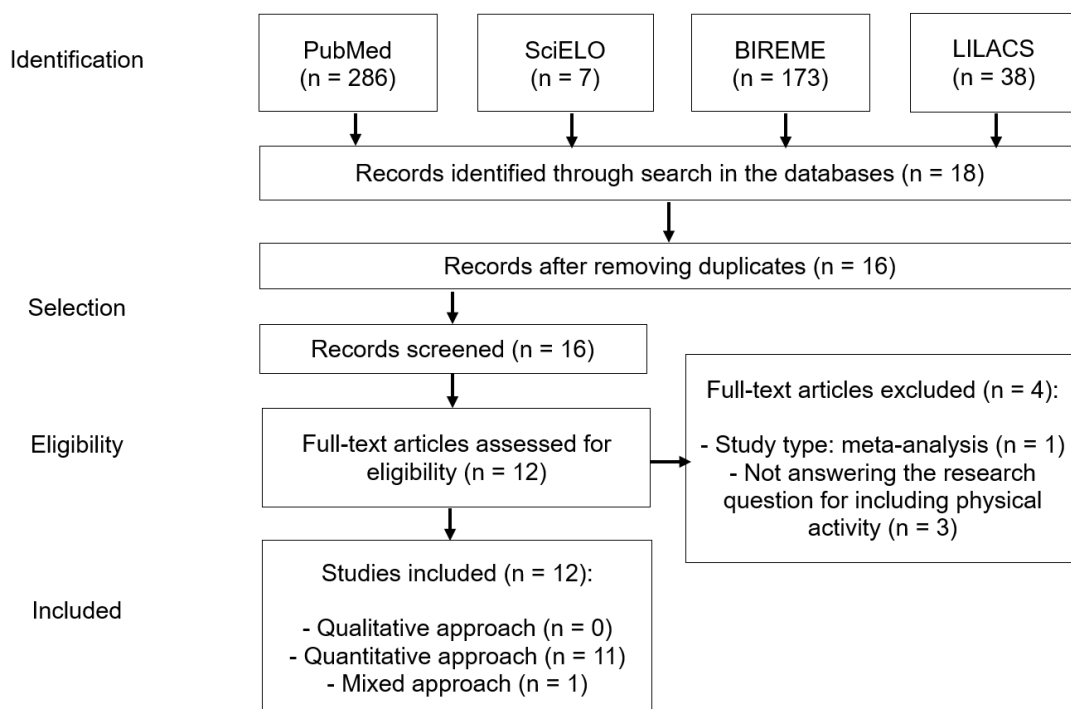


Figure 1. Process of selecting studies for the review.

Search strategy

Data were searched exploratively on June 18, 2025, combining selected descriptors according to the Medical Subject Heading Terms (MeSH) and Health Sciences Descriptors (DeCS) and using Boolean operators: (elderly) and (memory) and (memory training), aligned with the objective and research question of the integrative review. It used the acronym PICO (“P” represents Patient/Population, “I” the Phenomenon of Interest, and “Co” the Context) to assist in delineating the search, where P: older people, I: memory workshops, and Co: groups.

Selection criteria

The inclusion criteria for this study were original articles, freely accessible in full, published in

Portuguese, English, and Spanish, that included the cited descriptors in their title or abstract. It excluded duplicates and publications related to grey literature, literature reviews, letters to the editor, theses, and dissertations.

Data analysis

Data for study eligibility were extracted using an Excel® form developed by the authors for the integrative review. The data were initially analyzed according to the title, followed by the abstracts and full-text reading of the studies included in this review. Possible discrepancies were discussed among researchers; a third researcher was consulted when necessary. Then, they created a summary chart of the studies included in this review (Chart 1).

Chart 1. Summary of the studies that comprised the integrative literature review

Author (year)	Article title	Objective	Methodology	Results
Golino, Flores-Mendoza (2016) ¹¹	Development of a cognitive training program for the elderly	To present the procedures for developing a cognitive training protocol for healthy older individuals in a Brazilian context.	Cognitive tasks were developed focusing on stimulating and teaching strategies aimed at attention, processing speed, episodic memory, and working memory. The tasks were distributed across twelve 90-minute weekly individual training sessions.	The results of this pilot study highlight the importance of testing the impact of the developed program in a randomized clinical trial to verify its effects on the mental performance of older adults.
Cruz et al. (2022) ¹²	Cognitive training for elderly people without cognitive impairment: an occupational therapy Intervention during the COVID-19 pandemic	To compare the performance of healthy older adults in routine and cognitive activities, quality of life, and depressive symptoms. Some of them participated, and some did not participate in cognitive training applied by occupational therapists.	This non-randomized, matched-group, clinical trial with a quantitative, analytical, longitudinal approach used standardized assessments: Geriatric Depression Scale, Addenbrooke's Cognitive Examination-Revised, Routine Task Inventory-Expanded, World Health Organization Quality of Life Assessment (WHOQOL) (BREF and OLD), and the Instrument for the Assessment of Attitudes towards Aging, applied before and after the intervention. It included 24 sessions, twice a week, each lasting 60 minutes. The intervention was based on the natural cognitive decline of aging, and the analysis included activities and games.	Case group (n = 10), aged 62 to 74 years; control group (n = 11), aged 61 to 73 years. The effect size calculation (Cohen's d) revealed a training effect for the following variables: depressive symptoms (1.12); cognition: memory (0.82), visual-spatial function (0.55), fluency (0.56), MMSE (1.00), and ACE-R (0.98); quality of life: sensory functioning (0.61); intimacy (0.51), and physical (0.50). No gain effects were observed for the other variables.
Brito et al. (2019) ¹³	Evaluation of the Working Memory Training Program for the Elderly	To check the benefits of Working Memory Training on DVD for seniors.	The assessment initially used the MMSE and then a specific working memory test. The experimental group watched three DVDs that make up the first set of exercises and were reassessed with the specific working memory test at regular intervals. The control group also underwent reassessments at the same time points as the experimental group.	While the control group showed no changes in the assessments, the experimental group's performance on the memory test improved significantly after the DVD presentation. Furthermore, the experimental group reported benefits from the training for their daily activities.
Vasques et al. (2023) ¹⁴	Promoting cognitive health: a virtual group intervention for community-living older adults	To analyze the effects of promoting cognitive health in a virtual group intervention for older adults living in the community.	This study employed a mixed-methods approach, being prospective and analytical. Nine weekly 2-hour meetings were held using an online platform.##	The most relevant mnemonic strategies for the qualifier "Did not use before and started using after the group" were association (n = 10; 71.4%) and dual-task inhibition (n = 9; 64.3%). According to the tests, the intervention improved incidental, immediate, and delayed recall, as well as memory perception for some aspects. The synchronous online group intervention proved viable for the community-dwelling older adults who participated in the study.
Schultheisz et al. (2018) ¹⁵	Effect of cognitive stimulation workshops on the self-esteem and cognition of the elderly: A pilot project	To determine the effects of a cognitive stimulation workshop program on the self-esteem and cognition of older adults.	Three-step protocol: 1) Survey of demographic data and assessment of cognition using a neuropsychological and self-esteem battery with the Rosenberg Self-Esteem Scale (RSS), before training; 2) Participation in 12 cognitive stimulation workshops; and 3) Cognitive assessment and RSS after training.	The results showed that the training produced positive effects on the performance in cognitive tests of older people with and without cognitive impairment. Consequently, it had a positive impact on their self-esteem.
Rocha, Chariglione (2020) ¹⁶	Episodic Memory and Elderly People: Main Alterations from Different Cognitive Interventions##	To verify differences related to episodic memory and mood in different interventions.	Quasi-experimental design with pre- and post-intervention assessments and a cross-sectional design lasting 24 months.	Differences in episodic memory were observed between the interventions, as well as improvements in mood, regardless of the type of intervention.
Silva (2025) ¹⁷	Supera cognitive stimulation study with cognitively-unimpaired older adults: methodology and initial results of a randomized controlled clinical trial	To describe the methods and initial characteristics of participants in a randomized clinical trial on cognitive enhancement.	Randomized clinical trial with three groups with##72 two-hour weekly sessions.	The three groups were similar in terms of cognitive performance and sociodemographic and psychosocial variables but differed significantly in relation to depressive symptoms; the training group obtained the highest score.



Author (year)	Article title	Objective	Methodology	Results
Chau et al. (2025) ¹⁸	Online Group-Based Dual-Task Training to Improve Cognitive Function of Community-Dwelling Older Adults: Randomized Controlled Feasibility Study##	To explore the feasibility, acceptance, and potential effects of online group dual-task training as an intervention to enhance cognitive function among community-dwelling older adults.	Randomized controlled trial. The intervention group participated in 60-minute online dual-task training sessions twice a week for 12 weeks.	Online dual-task training is a viable and well-accepted intervention for older adults, with potential benefits for cognitive skills. Online training can complement in-person sessions.
Norouzi et al. (2019) ¹⁹	Dual-task training on cognition and resistance training improved both balance and working memory in older people	To investigate the extent to which two different dual-task interventions improved working memory and balance.	A case-control study with tests applied at the beginning and end of the research, 4 and 12 weeks later, on balance and working memory performance.	Balance and working memory improved from baseline to post-intervention and follow-up.
Liao et al. (2020) ²⁰	Using virtual reality-based training to improve cognitive function, instrumental activities of daily living, and neural efficiency in older adults with mild cognitive impairment##	To investigate the effects of 12 weeks of physical and cognitive training based on virtual reality (VR) on cognitive function, brain activation, and instrumental activities of daily living (IADL), and to compare the VR intervention with combined physical and cognitive training.	Single-blind randomized clinical trial with older adults with mild cognitive impairment divided into a VR-based physical and cognitive training group and a combined physical and cognitive training (CPC) group for 36 sessions over 12 weeks.	Both groups improved in executive function and verbal memory (immediate recall). However, only the VR group improved significantly in global cognition ($P < 0.001$), verbal memory (delayed recall, $P = 0.002$), and IADL ($P < 0.001$) after the intervention. The group $\times$ time interaction effects further demonstrated that IADLs improved significantly with VR training compared to CPC training ($P = 0.006$). Hemodynamic data revealed decreased activation in prefrontal areas after training ($P = 0.0015$), indicative of increased neural efficiency in VR-trained individuals.
Lopes, Argimon (2016) ²¹	Cognitive training in the elderly and its effect on the executive functions.	To characterize older adults undergoing this intervention to measure the effects of cognitive training with an emphasis on executive functions, comparing an experimental group with a control group.	Quantitative research, with a quasi-experimental design; correlational and comparative, with pre- and post-tests and intervention.##Eight 90-minute intervention sessions were conducted once a week.	The study found significant improvements in attention, processing speed, working memory, vocabulary, and cognitive flexibility.
Lenze et al. (2022) ²²	Effects of mindfulness training and exercise on cognitive function in older adults: a randomized clinical Trial##	To determine whether mindfulness-based stress reduction (MBSR), exercise, or a combination of both improves cognitive function in older adults.	Randomized clinical trial for the following interventions: MBSR with a goal of 60 minutes of meditation daily ($n = 150$); exercises with aerobic, strength, and functional components with a goal of at least 300 minutes per week ($n = 138$); MBSR and combined exercises ($n = 144$); and a health education control group ($n = 153$). The interventions lasted 18 months and consisted of group classes and home practice.	Of the 585 randomized participants (mean age, 71.5 years; 424 [72.5%] women), 568 (97.1%) completed 6 months in the study, and 475 (81.2%) completed 18 months. At 6 months, there was no significant effect of mindfulness training or exercise on episodic memory or executive function without exercise, and there were no intervention effects at the secondary 18-month endpoint. There was no significant interaction between mindfulness training and exercise at 6 months. The results do not support the use of these interventions to improve cognition in older adults with subjective cognitive complaints.

Source: Developed by the authors.



Results

General characterization of the sample

The search identified 504 articles in the databases. Based on the established criteria, 12 articles comprised the sample for this review (Figure 1).

In general, the memory stimulation sessions took 60 to 120 minutes and lasted 4 to 24 weeks. The participants' ages ranged from 60 to 82 years, with 67 years being the most prevalent. Only one article¹¹ included people over 80 years old. Most studies in this review were composed of women. In the studies analyzed, the predominant education level among the older adults was higher education.

Detailed description of the studies

The review identified in-person and remote individual and group interventions, as well as strategies based on cognitive games, structured tasks, dual-task training, DVD programs, virtual reality, and practices combining physical exercise and mindfulness.

A study¹² with 21 healthy older adults (10 in the case group and 11 in the control group) assessed routine and cognitive activities, quality of life, and depressive symptoms using standardized instruments. Cognitive training was conducted with the case group. With population aging, cognitive changes increase, as does the need for society to be prepared, requiring greater attention to the health of older people to promote, prevent, and maintain their autonomy. In this context, the study results indicated improvements in memory, visuospatial function, fluency, some quality-of-life domains, and a reduction in depressive symptoms in the intervention group.

A study by Brito et al. (2019)¹³, which also worked with control and experimental groups, included 16 older people over 60 years of age, 12 in the experimental group and four in the control group. Working memory was assessed before and after sessions with DVDs containing strategies and exercises. The findings show an improvement in working memory in the experimental group and no changes in the control group, with reports of benefits also in the daily activities of the participants in the experimental group.

In this context, Golino and Flores-Mendoza (2016)¹¹ assessed attention, processing speed, episodic, and working memory through subtests in 15 healthy older people, seven from the experimental

group and eight from the control group. They found improvement in the experimental group in the coding, arithmetic, and figure completion subtests, but no gains in the others, pointing to the need for randomized clinical trials.

A program¹⁴ developed online with 14 cognitively healthy older people assessed cognitive functions, memory complaints, and use of mnemonic strategies. The findings showed improvement in incidental, immediate, and delayed recall, a reduction in memory complaints, and digital inclusion of the participants.

The research by Schultheisz et al. (2018)¹⁵ included older people without cognitive complaints and assessed cognition and self-esteem before and after 12 weekly 60-minute workshops. The results demonstrated significant improvement in both aspects. These findings suggest that cognitive stimulation through workshops can promote gains in functions such as memory and attention, possibly associated with neuroplasticity. It also helps to increase self-esteem through better perception of one's cognitive performance, greater autonomy, and engagement in the participants' daily activities.

Another study¹⁶ evaluated episodic memory and mood before and after different cognitive interventions. The findings indicated improvement in these two aspects, regardless of the strategy used.

Randomized clinical trial by Silva et al. (2025)¹⁷ with 207 healthy older adults, distributed into three groups, in community centers and retirement associations, assessed cognitive performance and psychosocial variables. Initial results showed similarity between the groups, except for a higher score on depressive symptoms in the training group.

Another intervention¹⁸, conducted online with 76 older adults, assessed cognitive function using a memory inventory in Chinese and the Montreal Cognitive Assessment. The results showed significant improvement in cognitive function in the intervention group and additional benefits in physical and social aspects.

A study¹⁹ with 60 older males assessed balance and working memory before and after 4 weeks of dual-task training combined with resistance training. The findings revealed improvement in both intervention groups, with more significant gains in the group that performed motor-cognitive training.

Liao (2020)²⁰ conducted his research with 34 older people with mild cognitive impairment, using virtual reality-based training to assess cognitive

functions, instrumental activities of daily living, and neural efficiency. After 12 weeks of virtual reality training, only the group that received the intervention had significant overall cognitive improvement and greater neural efficiency.

Lopes and Argimon (2016)²¹ sought to characterize older adults undergoing cognitive training with an emphasis on executive functions, comparing an experimental group with a control group, finding significant improvements in attention, processing speed, working memory, vocabulary, and cognitive flexibility.

Finally, the study by Lenze et al. (2022)²² sought to analyze the practice of mindfulness associated or not with physical exercise regarding the impact on cognitive functions but did not find significant differences in older adults with subjective cognitive complaints.

In general terms, the analysis of the included studies shows that interventions aimed at cognitive stimulation in older adults present several cognitive, emotional, and social benefits. Regarding cognitive benefits, the studies identified improvements in different domains of cognitive functions. Advances were observed in episodic memory, working memory, attention, processing speed, verbal fluency, and executive functions after cognitive training programs or structured stimulation. Specific interventions have also demonstrated improvements in immediate and delayed recall and memory perception, as well as gains in instrumental activities of daily living. In some studies, programs based on cognitive tasks, virtual reality, or dual-task training have shown positive effects on working memory, executive function, and global cognition, indicating that different strategies can help to maintain or improve cognitive performance in older adults^{11, 12, 14, 19, 20, 21}.

Regarding emotional benefits, studies have shown fewer depressive symptoms, improved mood, and increased self-esteem among intervention participants. Cognitive stimulation programs in the form of workshops or groups have also demonstrated a positive impact on the psychological well-being of older adults, suggesting that participation in structured activities can contribute to subjective aspects of mental health^{12, 15-17}.

The social benefits stand out due to the importance of interaction among participants and the sharing of cognitive strategies in a group context. Studies that used group interventions, whether

in-person or online, have shown greater use of mnemonic strategies, exchange of experiences, and engagement among older adults, which may favor social participation and the perception of support among participants^{14, 18}, with reports of perceived benefits in daily activities after cognitive training, suggesting a functional impact of these interventions¹³.

Discussion

The process of healthy aging is linked to the absence of diseases, other aspects of the social determinants of health, and their autonomy and independence, which in turn are linked to their cognition. Stimulation groups provide functional improvements and reduce the effects of degenerative diseases, leading to a better quality of life for the older population⁷.

The studies analyzed indicate that cognitive training in older adults brought several benefits in the performance of cognitive functions (e.g., memory, attention, language, and executive functions) and in emotional and social aspects as a whole. In general, the interventions reduced subjective memory complaints, improved cognitive tests, and increased self-esteem and social engagement^{12-18, 20, 21}. Cognitive training can be a positive alternative for improving the working memory of older people during the stimulation period¹³.

In the aging process, some cognitive functions naturally decline over the years, but in healthy aging, cognitive decline can be compensated for, as the older person manages to approximate current performance to their maximum capacity through cognitive plasticity²³. Thus, cognitive training can increase performance and maintain cognitive skills and healthy aging⁶.

Moreover, some studies have pointed to positive effects on mood and quality of life¹², especially when training was carried out in groups or with social interaction. Memory stimulation in groups of older people contributes to psychomotor development, combats isolation, and promotes active and healthy aging²⁴. Cognitive activities stimulate memory, concentration, and attention, provide moments of leisure, and strengthen friendship and bonding between patients and between them and professionals^{12, 18, 24}.

Another point observed is that the research formats, whether in person or online, proved to be

functional for most participants^{14,20}. Online activities are feasible options in situations of geographical distancing and/or social isolation because, in addition to the benefits in cognitive and mental functions, the proposed intervention allows participants to maintain and build new social bonds^{25,26}.

Stimulation for older people without memory complaints¹⁵ aims to improve memory performance and help them maintain functioning in performing daily activities, as a way of protecting their functional capacity against cognitive decline. In this area, cognitive stimulation activities can contribute to the planning and execution of interventions aimed at preventing diseases related to cognitive impairment and, above all, committed to promoting health and quality of life²³.

Existing cognitive interventions, such as cognitive training, have the potential to promote health by optimizing neural plasticity; also, combined with other types of interventions, such as physical activities and a balanced diet, they result in better individual performance and neural reorganization as a positive and favorable outcome for the quality of life of older adults²⁷.

Overall, the evidence suggests that cognitive training is a promising strategy for maintaining and improving cognitive functions in older adults, also impacting emotional and social aspects. However, more robust and long-term studies are needed to confirm the extent and permanence of these benefits.

Several studies have shown a high adherence rate, although there have been reports of difficulties related to familiarity with the technologies used, physical and cognitive limitations, and logistical barriers, which may have affected participant engagement and the continuity of the research. A critical factor reported was the need for technological support and individualized instructions for the use of digital platforms, which are fundamental to the success of online interventions^{12-18, 20}.

The studies that were included have limitations that impact the interpretation of the studies. One of the most cited themes was the adequacy of the subject matter in the interventions, reporting difficulties in establishing how appropriate and aligned the intervention approach was with the needs, interests, and capabilities of older people¹². Many studies used standardized protocols, which may not have fully contemplated the individual needs, cognitive abilities, and preferences of older

people, as evidenced by the reported preference for in-person modalities over online interventions¹¹. Alternative techniques lack further studies, with only one²² involving mindfulness in this literature review.

The dropout rate was another recurring limitation. High dropout rates can compromise the robustness of the findings and create the impression that the interventions were not sufficiently attractive, accessible, or adapted to the participants' conditions. Other factors related to the high dropout rate may be health issues, motivation, and technical challenges^{12-16,20}. Methodological limitations also included small sample sizes and the absence of rigorous inclusion and exclusion criteria, which can cause selection bias^{11, 21}.

Conclusion

In conclusion, the reviewed studies indicate that cognitive training can contribute to the improvement of cognitive domains in older adults, particularly attention, memory, and executive functions, in addition to possible emotional benefits such as increased self-confidence and self-esteem. Interventions can be carried out in different ways and in various settings, such as community services and primary healthcare, and help improve the mental and social well-being and quality of life of participants. Despite the positive results, most of the analyzed studies presented some limitations, such as small participant numbers and short follow-up periods, indicating the need for more research to confirm the analyzed benefits in the long term. Overall, cognitive training is a promising strategy for the development of healthy aging, contributing to the maintenance of cognitive abilities in older adults.

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