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Review Article

Impacts of participatory arts-based interventions on well-being of older adults without dementia: an umbrella review and a conceptual artistic participation framework

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Abstract

Background and Objectives: While participatory arts are thought to benefit older adults' well-being, evidence has focused on dementia. This umbrella review synthesizes evidence from systematic reviews (SRs) and meta-analyses (MAs) on the impacts of participatory arts for older adults without dementia, and conceptually organizes findings using the proposed "Aesthetic–Engagement–Creativity" (AEC) framework.

Research Design and Methods: Following PRIOR guidelines, we searched MEDLINE, PubMed, PsycINFO, The Cochrane Library of Systematic Reviews and gray literature to September 2023, with an update in June 2025. Study characteristics and well-being outcomes were extracted. We used the AEC framework for conceptual categorization, assessed primary study overlap using the corrected covered area (CCA) and the methodological quality with the AMSTAR 2.

Results: Eighteen reviews were included, with minimal study overlap (CCA = 1.96%). However, the evidence base was weak; 12 reviews were of low or critically low quality. A synthesis of the six moderate-to-high quality reviews revealed that dance was the most studied modality, associated with improved physical well-being. The benefits for other well-being domains and art modalities were mixed, and significant heterogeneity in study designs and measures complicated comparisons. Our retrospective application of the AEC framework suggests that considering participants' aesthetic preferences and optimizing engagement and creativity levels may be important, but this link is speculative.

Discussion and Implications: Participatory arts show potential for promoting well-being of older adults, but robust conclusions are constrained by the poor quality, underrepresented art modalities, and heterogeneity of the existing evidence. The AEC framework is offered as a conceptual tool requiring future empirical validation.

Keywords: Meta-review, Arts for older adults, Aesthetics, Engagement, Creativity

Background

Participatory arts for older people

Older age is associated with many health and mental health risks, and 23% of the total global burden of disease is attributed to disorders in people aged 60 years and older (Prince et al., 2015). To improve older adults' well-being and reduce disease burden, targeted primary, secondary, and tertiary prevention is needed (Prince et al., 2015). For preventive purposes, participatory art is pertinent for its stimulating and engaging nature and readiness for integration with existing aged care services (McLean et al., 2011). Participatory arts concern active engagement in arts rather than simply observing; for instance, dancing as opposed to appreciating a dance performance (Noice et al., 2014). Participatory arts are also different from art therapies in several ways. While art therapies are typically practiced by trained art therapists and regulated by professional bodies, participatory arts are usually community-based, facilitated by artists and other mental health professionals or cofacilitated by art therapists (Stickley et al., 2018). The therapeutic effects of participatory arts are embedded in the participatory process and are normally undertaken within the community as a tool to promote health, mental health, well-being, and social integration (South, 2004). Nevertheless, the distinction between participatory arts and art therapy can be blurred, and some

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participatory arts programs have therapeutic elements and are used for treating specific health and mental health conditions, for example, the *Meet Me* program hosted at the Museum of Modern Art (MoMA) for people with dementia (The MoMA Alzheimer's Project, 2024). Despite the differences, both art therapies and participatory arts utilize various forms of expression, including but not limited to music, dance, drama, visual art, literature, digital art, photography, and sculpture (Cousins et al., 2020).

There is accumulating empirical evidence to support the health and mental health benefits of engaging in arts (Atanasova et al., 2019). Recent evidence suggests that participatory arts programs have positive benefits for individuals with mental health issues; for example, they increase people's levels of empowerment (Hacking et al., 2008) and reduce symptoms of depression and anxiety (Fancourt et al., 2016). A systematic review (SR) of community-based arts and health interventions for people with dementia found that different types of art activities can improve cognitive functioning in various ways and to varying extents (Young et al., 2016). However, existing literature mainly focuses on art therapies for older people with dementia and cognitive outcomes (Camic et al., 2013; Kinney & Rentz, 2005; Osman et al., 2016), because much of the research priority is given to diseases associated with a heavy burden on patients, their families, and society (Shah et al., 2016). In the meantime, there has been no synthesized summary of how participatory arts are used to enhance the health and well-being of older people who do not have cognitive decline but still face other age-related physical, social, and psychological changes (Keyes & Waterman, 2003). In addition, there has been limited discussion about the potential mechanism of how participatory arts impact older people's well-being (Noice et al., 2014).

Plausible mechanisms of action

Attempts have been made to understand the causal pathway between arts and well-being outcomes. Some studies have examined whether different art modalities impact the outcome differentially; however, given the variabilities in study design and outcome measures, an SR concluded that firm comparisons between interventions using different art modalities could not yet be drawn (Young et al., 2016). In the meantime, some researchers started to inquire about a more generic mechanism of artistic engagement. Literat (2012) proposed a pyramid of artistic participation ranging from receptive to executory and structural and explained how the contributors' creative agency grows as participation intensity increases. Based on the literature review of theoretical models and empirical studies, we propose a modified pyramid at Literat's (2012) executory level (see Supplementary Material 1 for more details), which includes three potential mechanisms pertinent to all participatory arts regardless of the art modality. This framework includes respect for participants' aesthetic preferences, level of engagement, and demand for creativity.

Aesthetic preferences

Arts and aesthetics are intuitively linked, and the psychological impact of aesthetics has been extensively researched across various fields. For example, research has shown that the aesthetic attributes of natural settings, such as landscapes and green areas, can positively impact how individuals perceive and experience their surroundings, resulting in enhanced well-being across the life course (Douglas et al., 2017). The concept of "the use of arts" is highly related to wellness studies rather than treatment studies (Castora-Binkley et al., 2010), and considering participants' aesthetic preferences in participatory arts may influence the therapeutic process and outcome (Chatterjee & Vartanian, 2016). For example, some programs take account of participants' preferences, e.g., favorite or culturally preferred music, and integrate them into the program design and implementation, producing positive results (Hsu et al., 2022).

Level of engagement

Another plausible mechanism for how participatory arts may influence well-being outcomes is through engagement, which is not unique to arts programs but interacts with how creatively arts are used. The level of engagement, often used interchangeably with the state of participation, refers to how individuals' attention is attracted, drawn in and held by something with positive emotions, such as playfulness and enjoyment (Reschly et al., 2008). Previous studies have analyzed engagement levels and categorized them into passive/receptive *versus* active/participatory modes (Bone et al., 2024; Davies et al., 2012; The Government of Queensland, 2014). Active arts activities (e.g., singing and dancing) were found to be more engaging than passive activities (e.g., listening to music) (Davies et al., 2012). All forms of art can be utilized to facilitate engagement at different levels; for example, sonic arts can be used in a receptive (e.g., music appreciation) or a participatory manner (e.g., singing, choir, playing musical instruments) and the level of engagement in arts-based activities may influence the well-being outcomes.

Demand for creativity

Arts-based activities are built on creativity and expression (Gillibrand et al., 2023), and creative expression in art-making has been identified as a healing practice that can positively impact older adults' mental and physical well-being (Evans et al., 2022). Encouraging creativity in arts-based activities enables individuals to experience enhanced communication, increased attention, and improved expression, mood, and memory (Seo et al., 2016); almost all the cognitive improvements seen in the studies on various arts modalities are consistent with current theories of brain plasticity and cognitive reserve (Noice et al., 2014). The demand for creativity varies significantly in different participatory arts programs; however, no study has examined the level of creativity as a plausible mechanism of how participatory arts impact participants' well-being.

It is also noticeable that in participatory arts programs, considerations for aesthetic preferences, the level of engagement, and space for creative expression may be highly interrelated. Research has shown that active involvement in the creative process intensifies engagement and vice versa (Liu et al., 2023). Literat's (2012) model already highlighted the importance of engagement and creativity, and our main modifications included replacing Literat's *tokenistic* with *aesthetically respected* level, adding explanation to the *engaged* level, and renaming the *creative* to *creatively engaged* level to better reflect its function (see Figure 1). The *engaged* level typically considers participants' aesthetics and demands for creativity, but to a medium level; for instance, asking people to copy a drawing they like but not asking them to do a free drawing. The creatively engaged level typically demands more

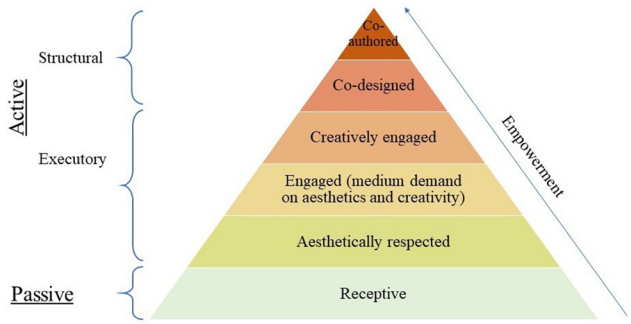

Figure 1. A revised schematic depiction of the levels of artistic participation, based on Literat (2012), illustrates a layered pyramid showing the progression from passive to active participation, with empowerment increasing toward the peak.

self-initiated and innovative expression from participants, for example, writing a new song or performing a drama with one's own script, and, therefore, more engaging than the previous two levels. Finally, Literat's structural level of artistic participation overlaps with participatory action-based research, which may have added benefits by empowering participants in the codesign process to address their needs, contribute to the implementation, and evaluate the outcomes (Baldwin, 2012). However, existing participatory arts programs rarely facilitate this level of participation. Finally, the Aesthetic–Engagement–Creativity (AEC) framework advanced here is conceptual, integrating themes from prior reviews and theories. It is intended as a heuristic to organize findings rather than a validated causal model in this study.

Research gaps and aims

There is increasing empirical research on the effects of arts on older people's well-being; consequently, many SRs and meta-analyses (MAs) have emerged. However, as mentioned earlier, existing SRs mainly focus on studies in older people with dementia, and there has been no synthesized summary of the impacts of participatory arts, including participatory arts-based interventions, on older people's well-being. In addition, the mechanisms of action for participatory arts have not been sufficiently discussed. Therefore, we conducted an umbrella review of SRs and MAs of participatory arts to answer the following questions:

1. What are the impacts of participatory arts-based intervention on the physical, mental, emotional, and social well-being outcomes of older adults without dementia?
2. How can the "AEC" (aesthetic preferences, levels of engagement and creativity) conceptual framework be used to classify existing participatory arts interventions, and what patterns emerge in relation to their reported well-being outcomes?

Method

We conducted an umbrella review by the preferred reporting items for overviews of reviews (PRIOR) statement (Gates et al., 2022) (Supplementary Material 2, see online supplementary material). Prior to the review, we detailed the study's scope and registered a protocol with PROSPERO (CRD42022355741). In the subsequent sections, we report the eligibility criteria, systematic search process, screening and data extraction procedure, quality assessment, and the synthesis method used.

Eligibility criteria

The population, exposure, outcome, and research type framework (Sala et al., 2024) have been used to define prior eligibility criteria: (1) Population: We included reviewers targeting older adults aged 60 years and above without dementia. Studies were excluded if they focus on (>60% of the included primary studies) other age groups or older adults with neurocognitive disorders, including dementia, its subtypes (e.g., Alzheimer's, vascular), and mild cognitive impairment. (2) Exposure: Studies reviewing various participatory arts-based interventions (including music, dance, drama, visual art, literature, digital art, photography, and sculpture); those focusing on art therapies (>60% of the included primary studies) were excluded. (3) Outcomes: Studies reviewing well-being outcomes (including physical, mental, emotional, and social) were included. (4) Research type: SRs and MAs of randomized control trials, nonrandomized control trials, and other studies using experimental design were included. SRs of qualitative studies or nonexperimental designed studies were excluded. Narrative reviews, scoping reviews, or mini-reviews were excluded.

Systematic search process

Articles were identified through a systematic search of MEDLINE, PubMed, PsycINFO, and The Cochrane Library of Systematic Reviews from inception to September 1, 2023. For the population, we used "older" and its variations or database filter of age group. For the interventions, we adapted the art modalities identified by the taxonomy study of art interventions in the search strategy (Cousins et al., 2020). We used "particip* art*," as well as specific art modalities including "music," "dance," "drama," "theatre," "visual art," "literature," "photography," and "sculpture." For the outcome, we used "well-being" and its variations. For study type, we used "systematic review" and "meta-analysis." Studies focusing on dementia and art therapy were excluded. The Boolean operators "AND," "OR," and "NOT" were used to combine search terms between, within, and excluding domains, respectively. The detailed search terms are presented in Supplementary Material 3 (see online supplementary material). A hand search for gray literature was conducted in March 2024 by combining the same search terms in Google Scholar and screening the first 100 entries in reverse chronological order. The search was updated in June 2025 with more specific art forms including "choir," "choral," "painting," "drawing," and "quilting." Three experienced researchers in mental health independently screened titles and abstracts against the eligibility criteria. Each record was screened in duplicate, and any discrepancies were resolved through a consensus meeting.

Screening and data extraction

We collected the following information adapted from the JBI data extraction tool for the umbrella review (Aromataris et al., 2020; Moher et al., 2009): authors, title and journal, year of publication, objectives, range (years) of included primary studies, number of primary studies, types of primary studies, titles of primary studies, the country of origin of primary studies, quality of primary studies, participants (mean age/characteristics/total number), setting/context, description of interventions,

outcome assessed/primary outcome, and heterogeneity. Customized items based on study objectives were included: type of art used, level of aesthetic and creative engagement based on the AEC framework, and well-being outcomes, comprising physical, mental, emotional, and social well-being (Keyes & Waterman, 2003). Physical well-being encompasses physical health, fitness, and overall functional status (Capio et al., 2014). Mental well-being pertains to an individual's comprehensive mental health, involving rational thinking and other cognitive health domains, while emotional well-being is more focused on the ability to manage moods and feelings (Keyes & Waterman, 2003). Social well-being relates to the collective health of individuals within a community or society, which covers aspects of social life such as support networks, social connectedness, and social inclusion (Keyes, 1998). A data extraction form was created based on the above items. Three authors collected the included information independently, a fourth author checked the accuracy of the extrapolated data independently, and disagreements were resolved by discussion with the first author.

Calculation of overlaps

The overlap of included SRs/MAs was assessed using the corrected covered area (CCA) (Lunny et al., 2021; Pieper et al., 2014); where CCA = $N–r/rc–r$, with N indicating total number of included primary studies in SRs/MAs (including double counting), r indicating the number of unique primary studies, and c being number of SRs/MAs (Pieper et al., 2014).

Quality assessment

We used the updated Assessment of Multiple Systematic Reviews (AMSTAR 2) checklist to evaluate the quality of SRs and MAs (Shea et al., 2017). AMSTAR 2 appraises randomized and nonrandomized intervention studies using different risk-of-bias (RoB) assessment and MA methodologies on 16 items. Each included study was assessed using the checklist with the response options of "yes," "partial yes," "no," and "not applicable." Two authors carried out the RoB assessments independently, and a third author checked the information and resolved any disagreement by discussion with the first author. A consensus judgment was reached on the quality of each study as "high," "moderate," "low," or "critically low."

Synthesis method

We used narrative synthesis as outlined by Hennessy et al. (2019) and Papageorgiou & Biondi-Zoccai (2016), which is appropriate for synthesizing results from heterogeneous studies. The synthesis had three phases: preparation, organization, and abstraction (Hennessy et al., 2019). In reporting the results, we organized the findings in accordance with our two research questions by categorizing the well-being outcomes into physical, mental, emotional, and social well-being and classifying the participatory arts using the AEC framework. Two authors coded the outcomes and the participatory arts programs independently, and disagreements were resolved by discussion with the first author.

Results

Overview and CCA

The initial database search yielded 231 results, and an update in June 2025 found 20 more studies, totally 251. Sixteen duplicates were removed. The remaining 235 records were screened by title and abstract, 155 were excluded based on the inclusion and exclusion criteria. Gray literature search on March 1, 2024 identified four eligible studies. In total, 84 articles were sought for retrieval, two could not be retrieved. Of the 82 full texts assessed, 64 articles were excluded from the synthesis (see Supplementary Material 4 for the full list of excluded articles); most excluded studies focused on irrelevant populations ($n = 46$). The PRIOR flowchart (Figure 2) summarizes the reasons for exclusion. Eighteen articles were included in the umbrella review, and Supplementary Material 5 (see online supplementary material) summarizes the characteristics of the included SRs and MAs. The CCA was 1.95%, corresponding to a slight overlap (Pieper et al., 2014). Therefore, we did not exclude any SRs or MAs as the chances for overweighting some primary studies were small.

Methodological quality of included reviews

According to AMSTAR 2, nine (50%) of the 18 studies were deemed as having critically low confidence, three (16.67%) low, three (16.67%) moderate, and three (16.67%) high confidence. Most reviews did not report the source of funding, explain the selection of the study designs, justify and list out excluded studies, establish review methods prior to the conduct of the review, or incorporate risks of bias in interpreting review findings. Figure 3 provides a visual summary of quality, and full assessment is presented in Supplementary Material 6 (see online supplementary material).

To increase confidence of synthesized results, we presented the main findings from the six moderate and high-quality reviews (CCA = 3.26%), with supplements from all other included reviews (Castora-Binkley et al., 2010; Hsu et al., 2022; Hwang & Braun, 2015; Liu et al., 2021; Muinos & Ballesteros 2021; Noice et al., 2014; Ou et al., 2022; Petrovsky et al., 2021; Rodrigues-Krause et al., 2016; Rodríguez & Paris-Garcia 2022; Silva et al., 2018; van der Wal-Huisman et al., 2018). Among the six highlight reviews, three focused on dance and movement-based activities (Clifford et al., 2023; Hewston et al., 2021; Mattle et al., 2020), two on multiple modalities (McQuade & O'Sullivan, 2024; Quinn et al., 2025), and one on music (McCrary et al., 2022). Overall, the included primary studies had a low-to-moderate RoB in these six studies.

Impacts of participatory arts on well-being outcomes

Heterogeneity of well-being outcomes and measures

Table 1 summarizes the key findings from the six moderate and high-quality reviews, results are categorized into physical, mental, emotional, and social domains of well-being. Full synthesis of all included reviews is summarized in Supplementary Material 7 (see online supplementary material). Not all reviews explicitly specified the measurement tools, and among those that reported the measures of well-being, there were noticeable variations and heterogeneity. Supplementary Material 8 (see online supplementary material) summarizes the measured domains and tools (if reported).

Physical well-being

Dance is the most commonly used art form to address physical well-being, which is understandable because it can be seen as an aerobic exercise with multiple dimensions (Hewston et al., 2021), and also an attractive and enjoyable form of physical activity among many older adults (Moss et al., 2015).

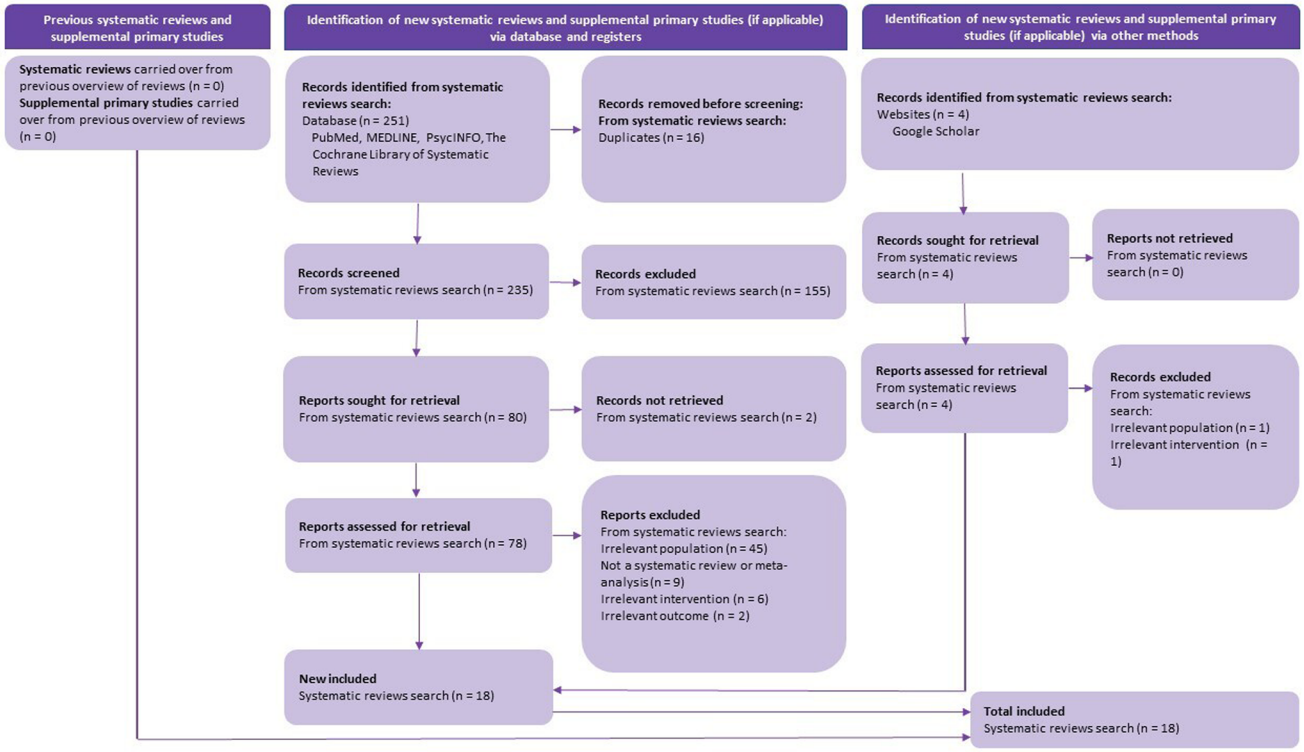

Figure 2. The PRIOR (Preferred Reporting Items for Overviews of Reviews) flowchart.

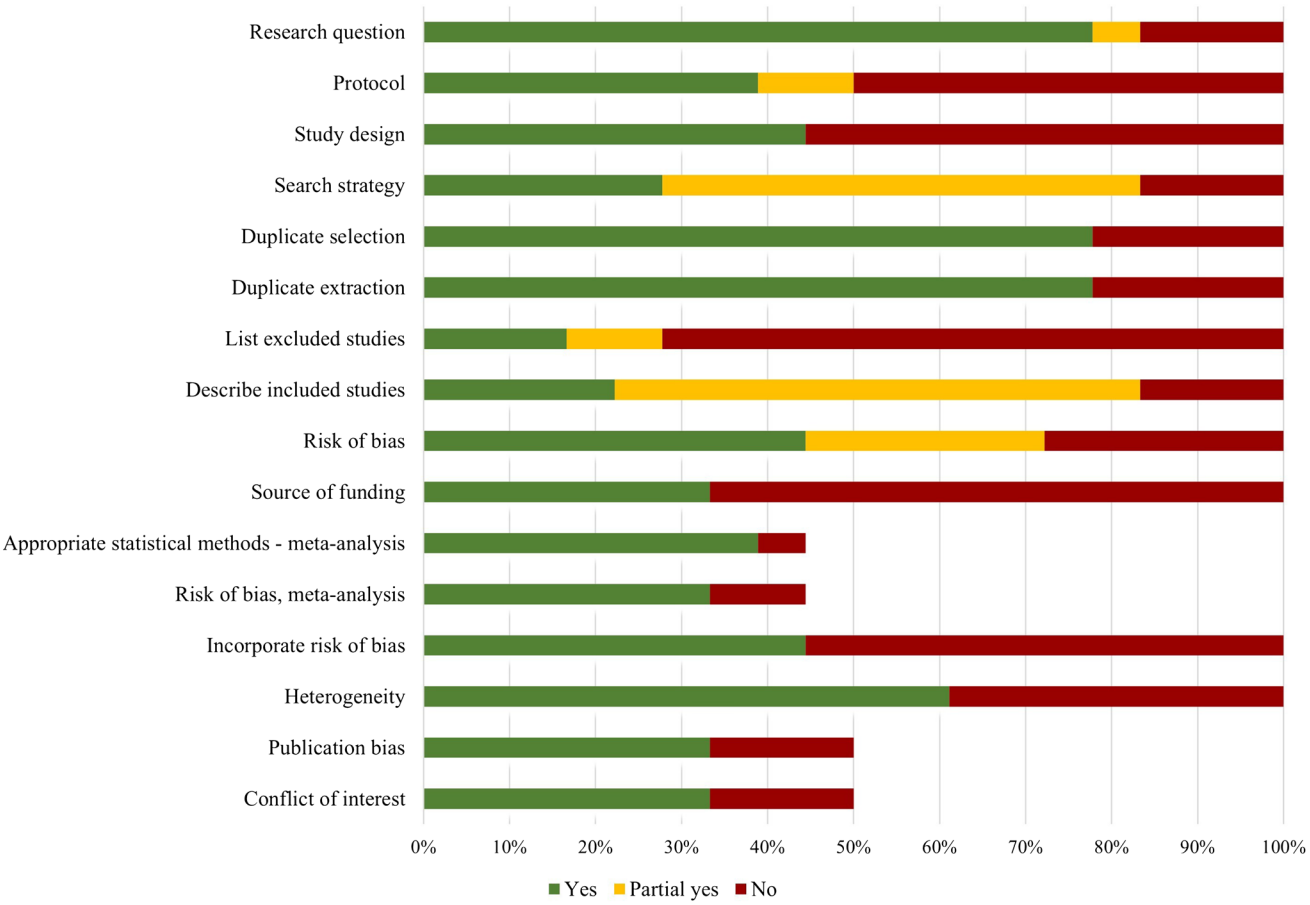

Figure 3. Summary of the AMSTAR 2 (Assessment of Multiple Systematic Reviews).

Table 1. Summary of findings from the selected systematic reviews and meta-analyses ($N = 6$) with categorized outcomes and level of artistic participation according to the "Aesthetic–Engagement–Creativity" framework.

Participatory arts domains	Author/year	Number of primary studies/ participants	AEC level	Well-being outcomes			
				Physical	Mental	Emotional	Social
Dance and movement	Clifford et al., 2023	22/1,090	Aesthetically respected, Engaged, Creatively engaged	Dance is superior to other interventions in increasing mobility and endurance Dance is equivalent to other interventions in improving gait, strength, balance, and flexibility	Marginal improvement in global cognition	N/A	N/A
	Hewston et al., 2021	11/1,412	Aesthetically respected, Engaged	N/A	Moderate effect on global cognition Little to no effect on executive function No effect for learning and memory, or language	N/A	N/A
	Mattle et al., 2020	29/4,239	Engaged	Dance is effective in reducing the risk of falls and improving physical function (balance, mobility, lower body strength) No effect on upper body strength	N/A	N/A	N/A
	McQuade and O'Sullivan, 2024	44/NR	Aesthetically respected, Engaged	Improved balance, lower body strength, flexibility, and aerobic fitness; and the PCS of HRQOL Mixed: six of eight studies showed improvement in physical or biological measures, two did not	Mixed: eight studies reported positive improvements, three revealed no significant differences over time or compared with control	Mixed: one study showed a reduction in depression, one no effect; one showed a reduction in anxiety, one showed increased anxiety	Mixed: one study showed improvement in social engagement, the other found no change
	Quinn et al., 2025	17/NR	Engaged	N/A	N/A	Moderate effects in reducing depression and anxiety	N/A
Music and singing	McCrary et al., 2022	26/779	Aesthetically respected, Engage	Positive changes in the PCS of HRQOL	Positive and meaningful changes in the MCS (mental health) of HRQOL	Positive and meaningful changes in the MCS (role-emotional) of HRQOL	Positive and meaningful changes in the MCS (social functioning) of HRQOL
	McQuade and O'Sullivan, 2024	34/NR	Aesthetically respected, Engaged, Creatively engaged	Mixed: some improvements in respiratory muscle strength and manual dexterity, but no difference in sleep quality or respiratory function	Mixed: improved cognitive function or subdomains in six out of seven studies, and no improvements in a 6-month singing group	Significant improvement in depression, anxiety, or mood Art-making studies showed no improvement in depression or stress, one singing study showed a slight increase in depression	Mixed: one study showed reduced loneliness, the other two showed no difference in loneliness score or social network score
	Quinn et al., 2025	12/NR	Engaged	N/A	N/A	Moderate effects in reducing depression and anxiety	N/A
Visual arts/ creative arts	McQuade and O'Sullivan, 2024	12/NR	Engaged	Mixed results: reduction in chronic pain, increased perceived physical health, mobility; no difference in activities of daily living	N/A	Reduction in depression, improvements in wellbeing and QoL	Reduced feelings of loneliness, improved sense of community and social connectedness
	Quinn et al., 2025	11/NR	Engaged	N/A	N/A	Moderate effects in reducing depression and anxiety	N/A

(Continued)

Table 1. (Continued)

Participatory arts domains	Author/year	Number of primary studies/ participants	AEC level	Well-being outcomes			
				Physical	Mental	Emotional	Social
Drama and theater	McQuade and O'Sullivan, 2024	3/NR	Engaged, Creatively engaged	No changes for the PCS of HRQOL	No changes found for cognitive functioning	Mixed results: improvement in emotional well-being in two studies, and no difference in another study	Gain positive social relations and a sense of belonging (one study: qualitative finding)
	Quinn et al., 2025	1/NR	Engaged	N/A	N/A	Pooled effectiveness in meta-analysis, not used in art-type analysis because of insufficient data.	N/A
Creative writing	Quinn et al., 2025	3/NR	Engaged	N/A	N/A		N/A
Multiple art types	Quinn et al., 2025	5/NR	Engaged	N/A	N/A		N/A

Note. HRQOL = health related quality of life; N/A= no answer; NR = not reported; MCS = mental component score; PCS = physical component score.

Collectively, dance shows consistent positive effects in increasing mobility and endurance (Clifford et al., 2023), reducing the risk of falling (Mattle et al., 2020), and improving physical health-related quality of life (HRQOL) (McQuade & O'Sullivan, 2024). Mixed results were found regarding gait, balance, strength, and flexibility, possibly due to heterogeneity in study design and measurement tools of the primary studies included in the reviews. One review, reporting positive effects of dance on the above measures, drew this conclusion from studies with nonactive controls (McQuade & O'Sullivan, 2024). In contrast, the other review, which reported no superior effects of dance, included active controls (Clifford et al., 2023). Mixed results were found regarding the effects of dance on bodily changes, primarily due to measurement heterogeneity (McQuade & O'Sullivan, 2024). For example, in studies where positive changes were found, measurements included but were not limited to inflammatory markers, blood pressure, where no difference was found in anthropometric parameters such as body mass index (Hwang & Braun, 2015; McQuade & O'Sullivan, 2024; Rodrigues-Krause et al., 2016). No association was found between dance and upper body strength, which may be explained by the fact that the upper body is primarily engaged in expressing and partnering in dances, rather than in building strength (Mattle et al., 2020).

Other forms of art are less frequently used for physical well-being. Music and singing have positive effects on physical well-being, as revealed by the subjectively measured physical component score of HRQOL (McCrary et al., 2022). Regarding objective measures, mixed results were reported, largely due to measurement heterogeneity; for example, improvements in respiratory muscle strength but not respiratory function (McQuade & O'Sullivan, 2024). Visual arts also showed some positive effects, including a reduction in perceived chronic pain and an increase in perceived physical health; however, no difference was found in activities of daily living (McQuade & O'Sullivan, 2024).

Mental well-being

Mixed results have been reported across different measurements, in different domains of cognition, and by different forms of art. McCrary et al. (2022) examined the subjective reporting from participants and concluded positive and meaningful changes from participating in music and singing as revealed by the mental component score (MCS) of HRQOL. Other reviews focused on objective measures of cognition and reported varied findings, with most of them suggesting improvements in global cognition over control (Clifford et al., 2023; Hewston et al., 2021; McQuade & O'Sullivan, 2024), but little to no effect on more specific and complex cognition, such as executive function, learning and memory, language (Hewston et al., 2021), or over a more extended period (Hewston et al., 2021; McQuade & O'Sullivan, 2024). The total dose (hours of training) in the dance program reviewed by Hewston et al. (2021) varied from 9 to 104 hr, and they speculated that participants may get some cognitive benefit in immediate memory from memorizing the dance sequences; however, that could not be transferred to long-term memory. Future research is needed to determine the optimal dose (frequency, intensity, intervention duration) of arts-based programs for older people.

Emotional well-being

Emotional well-being was addressed by all art modalities included in the reviews. Quinn et al. (2025) conducted an MA by analyzing data from 39 controlled studies, and found that participating in group arts interventions, regardless of art form, led to significantly greater reductions in depression and anxiety symptoms compared to taking part in nonarts activities, continuing with usual routines, or being placed on a waiting list for arts programs. Notably, the effect sizes observed were similar to those reported in other MAs of controlled studies examining pharmacological and psychological treatments for depression and anxiety in older adults (Carl et al., 2020; Cuijpers et al., 2020). Other reviews suggested mixed effects on emotional well-being from participating in dance or music (McQuade & O'Sullivan, 2024). In particular, the reduction in anxiety and depression from participating in singing groups could not be maintained at 6 months (Coulton et al., 2015), and one study using a community singing group even found a slight increase in depression, presumably due to small sample size ($N = 13$) and low baseline score (Davidson et al., 2014). Coulton et al. (2015)'s findings were from a 14-week community singing program, and they suggested that the greatest benefits occurred when participants were engaged in singing groups, and continued access to singing groups was important to confer sustained benefits. Finally, evidence was scant in

less-researched art modalities, with insufficient data to draw conclusions about the effects of drama/theatre, creative writing, and multimodality on emotional well-being.

Social well-being

Finally, social well-being was the least measured outcome domain, and it was often the secondary outcome in many primary studies. Music and singing were shown to have positive and meaningful changes in the MCS of HRQOL, which includes social functions related to social well-being (McCrary et al., 2022). Mixed results were found in both dance and music modalities that some studies showed improvements in social engagement or reduced loneliness, but others did not, presumably due to heterogeneity in timing of the measurement (McQuade & O'Sullivan, 2024). For example, a study reported significant improvements in social engagement after 16 weeks of dance (Brustio et al., 2018), and the other found no difference after 8 months (Merom et al., 2016), leading us to question the maintenance of such benefits. Other improvements included reduced feelings of loneliness, improved sense of community and social connectedness through visual arts/creative arts programs, and positive social relations and a stronger sense of belonging after participating in drama (McQuade & O'Sullivan, 2024).

Retrospective application of the AEC framework

It is important to note that the following section describes a retrospective and speculative application of the AEC framework to the limited descriptions available in the reviews. This was not a formal analysis but a conceptual exercise to identify potential areas for future research; therefore, no definitive conclusions can be drawn about the link between AEC levels and well-being outcomes.

Aesthetically respected

In five of the six included reviews, participants' preferences or choices, or their cultural background, were mentioned in the reviewed primary studies or the authors' interpretation of the findings. In Clifford et al. (2023), although the focus was on dancing, the authors emphasized that it is essential to carefully select the music accompaniment in accordance with participants' preferences, and the cultural context should be considered along with the dance prescription (Clifford et al., 2023). Hewston et al. (2021) emphasized the importance of designing dances with meaning and purpose, such as integrating cultural dances and selecting appropriate music, which can lead to empowering and energizing effects, social connectivity, and increased adherence. Quinn et al. (2025) noted in their discussion that the National Institute for Health and Care Excellence recommends that, whenever possible, patients should participate in selecting their preferred treatment options for depression (National Institute for Health and Care Excellence, 2022); and they further suggested that allowing individuals to choose their activities when offering group arts interventions may boost engagement and, consequently, enhance well-being (Howlin et al., 2022). In summary, respecting participants' aesthetic preferences may enhance the well-being outcomes; however, a direct comparison of the art activities chosen by participants with preassigned activities is lacking.

Engaged

Most of the primary studies in the included reviews were operating at the engaged level, which is the essence of participatory arts: for participants to learn, experience, experiment, or make something specific (Shafir et al., 2020). Results were generally positive in all well-being domains, regardless of the art modalities. Quinn et al. (2025) specifically compared the effects of participatory arts with those of art therapies across different art modalities. They concluded that there was no significant difference between arts engagement and art therapy, nor any difference between different types of art. However, in McQuade and O'Sullivan (2024), one study engaged community older adults with no musical training history in an intense piano training program, and results suggested that although participants had improved self-efficacy in music, it could not be transferred to generalized self-efficacy, and training could not reduce physiological stress (Bugos et al., 2016). To sum up, most participatory arts programs are intuitively engaged and lead to positive well-being outcomes; however, the intensity of engagement could be optimized to suit participants' capabilities and needs.

Creatively engaged

Creatively engaged programs were scarce, and few review studies explicitly recorded the demand for creativity in the primary studies, making it harder to identify such programs. In our best effort, we identified several primary studies in Clifford et al. (2023) and McQuade and O'Sullivan (2024). In Clifford et al. (2023), creative dance was employed in two studies (Cruz-Ferreira et al., 2015; Joung and Lee, 2019), where participants were asked to use their body language to express ideas and feelings through movement. In both studies, positive results were found for physical well-being in relation to the control group, and the authors attributed the outcome to the creativity and integration of physical and other domains (Cruz-Ferreira et al., 2015; Joung & Lee, 2019). In McQuade and O'Sullivan (2024), one study involved active music making with different, yet easy-to-use, instruments in a group setting, and no significant change was found in depression or social network (Yap et al., 2017). In summary, *creatively engaged* programs provide more space for expression and innovation; however, they may also present challenges in performance settings.

Discussion

In this umbrella review, we provide a high-level synthesis regarding the use of participatory arts among older adults without dementia and their effects. Different from formal art therapy, the programs included in the review focused on arts that can produce therapeutic benefits, and many of them can be aptly described as recreational in nature, which are pursued for enjoyment, social engagement, and personal growth. We took a broad view of well-being and used the proposed AEC artistic participation framework to conceptually organize findings and highlight areas for future inquiry.

Most existing reviews on participatory arts-based interventions for older adults have focused on dance and music, both of which are forms of the performing arts (O'Donnell et al., 2022). This highlights a significant evidence gap, as there is a clear underrepresentation of drama, theater, creative writing, and other visual or craft-based arts in the literature, a finding consistent with previous reviews (Curtis et al., 2018; Quinn et al., 2025). Regardless of art modalities, while most participatory arts-based interventions in the included reviews reported some positive well-being outcomes, several reported mixed results, especially regarding the maintenance effects of

participatory arts for cognition and emotional well-being, with benefits often not sustained at follow-up (Hewston et al., 2021; McQuade & O'Sullivan, 2024). No difference was found across art types (i.e., visual arts, dance, and music) (Quinn et al., 2025), in line with previous research indicating that group arts interventions can support mental health regardless of the art form (Williams et al., 2019). However, these results must be interpreted with extreme caution. The significant heterogeneity in study design, intervention intensity, facilitator training, outcome measures, and control conditions across primary studies makes direct comparisons between modalities highly challenging and potentially misleading.

Dance and movement are more commonly used for physical well-being than other art forms. This is understandable because dance can be viewed as a form of exercise, and in contrast to traditional exercise, it is a multifaceted sensorimotor rhythmic activity that combines various physical, cognitive, and social components (Vander Elst et al., 2023). Multicomponent programs that combine dance with music, mindfulness, or tai chi appear promising (Mattle et al., 2020; Meng et al., 2020), though robust comparative effectiveness data are still needed to determine if multimodal programs are superior to dance alone.

In applying the AEC framework retrospectively, we noted that most primary studies appeared to utilize participatory arts at the artistically respected and engaged level. Although no direct comparison could be made, most included reviews emphasized the importance of considering participants' preferences and cultural backgrounds (Clifford et al., 2023; Hewston et al., 2021; McQuade & O'Sullivan, 2024; Quinn et al., 2025). This aligns with the "Aesthetic" component of our framework. Mechanisms might include the complex cognitive–emotional process of aesthetic experience (Leder & Nadal, 2014; Leder et al., 2004) and the principles of person-centered care, where tailoring interventions may lead to better engagement and outcomes (Benjamin, 2018).

In addition to aesthetics, potential mechanisms of change also include social support (Seeman et al., 2001), sense of mastery (Cohen et al., 2006), and the benefits of engaging in stimulating and productive activities (Adams et al., 2011), which could be explained by brain plasticity and cognitive reserve theories (Vance & Crowe 2006). Brain plasticity, or neuroplasticity, refers to the brain's ability to reorganize itself by forming new neural connections throughout life (Vance & Crowe 2006). Despite naturally decreasing with age, it can still be reactivated across the life span in response to learning and experiences, including participatory arts promoting creative engagement and social interaction (Ballesteros et al., 2015). Cognitive reserve is a construct proposed by researchers to explain individual differences in susceptibility to cognitive or functional decline (Stern et al., 2020), and engaging in enriching life experiences, such as participating in arts, can lead to more efficient neurocognitive processing patterns, thus preserving cognition despite neurological challenges due to aging (Sumowski et al., 2014). However, the "Engagement" component is not straightforward, overly intensive engagement may have counter effects (Bugos et al., 2016). Future research must explore moderators such as intervention intensity, duration, and participant characteristics to identify the optimal level of engagement.

Regarding the "Creativity" component, very few primary studies explicitly describe a high demand for creative engagement, and no conclusion could be made on the association between demand for creativity and well-being. This is a critical gap. The model of creativity and flow (Csikszentmihalyi, 1990) offers a theoretical framework suggesting that a balance between the challenge of an activity and the participant's skill is essential. If this balance is not achieved, participants may experience either boredom or stress and anxiety, potentially leading to dropout (Castora-Binkley et al., 2010). While not captured in the included reviews, future research may use qualitative methods to explore the invaluable insights from participants' subjective experiences of creativity, challenge, and flow, illuminating these mechanisms in ways quantitative data cannot.

Limitations

The findings of this umbrella review should be interpreted in light of several significant limitations. First, and most importantly, the overall quality of the evidence base is weak. As determined by AMSTAR 2, the majority of the included SRs and MAs were of low or critically low quality. To mitigate this, our synthesis focused only on the six reviews rated as moderate-to-high quality. This decision, while necessary to improve confidence, means that our conclusions are drawn from a fraction of evidence base and that high-quality primary studies may have been missed if they were included only in the lower-quality reviews. This severely limits the robustness of our conclusions.

Second, there is high study heterogeneity. The included reviews differed substantially on the types of arts and their delivery, outcomes of interest, and the measurement tools used. This considerable heterogeneity prevents us from drawing specific, generalizable conclusions about how to design and implement arts-based interventions to achieve better outcomes for older adults.

Third, our search terms, while broad, did not exhaust all specific art forms (e.g., certain crafts, digital arts), and other nonclinical use of arts (e.g., recreational). Therefore, our umbrella review may underrepresent the evidence in these specific domains. Furthermore, our exclusion of purely qualitative reviews, while necessary for the scope of our review of interventions, means that we have omitted rich data that could illuminate mechanisms of change and the subjective participant experience.

Fourth, at the umbrella review level, it was challenging to test the AEC framework rigorously. Our classification of interventions was retrospective and based on limited descriptions provided by the review authors. Therefore, the proposed link between AEC levels and well-being outcomes remains speculative and requires future empirical validation through prospectively designed studies.

Conclusion

Overall, participatory arts show potential for enhancing the well-being of older adults without dementia; however, conclusions should be interpreted cautiously due to the low/critically low quality of reviews and high heterogeneity. We highlight methodological gaps and the need for rigorously designed primary studies and reviews using standardized outcome measures and longer follow-up, as well as research on underrepresented art forms. Qualitative research, though excluded from our quantitative synthesis, could illuminate mechanisms to guide

intervention design. To strengthen the evidence in this field, future research must prioritize methodological rigor, including high-quality randomized controlled trials with active control groups, standardized and validated outcome measures, and long-term follow-up to assess the sustainability of effects. The AEC framework is proposed here as a conceptual tool to guide future research, emphasizing that programs should be designed to consider participants' aesthetic preferences and optimizing the level of engagement and demand for creativity. Prospective randomized control trials with predefined AEC levels are needed to empirically test and validated the framework.

Supplementary material

Supplementary data are available at *The Gerontologist* online.

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Conflict of interest

None declared.

Data availability

Data are available upon reasonable request to the corresponding author. As the umbrella review is secondary research, all data are available as published papers or online. This umbrella review was preregistered with PROSPERO (CRD42022355741). The reviews reported in this study were screened for protocol preregistration using AMSTAR 2, and the results are presented in Figure 3 and Supplementary Appendix 6 (see online supplementary material).

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