

Art Interventions to Alleviate Loneliness Among Older Adults: A Systematic Review of Randomized Controlled Trials

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ADMINISTRATIVE INFORMATION

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Conflicts of interest - None declared.

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Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 20 April 2026 and was last updated on 20 April 2026.

INTRODUCTION

Review question / Objective This systematic review aims to evaluate the effectiveness of arts-based interventions in reducing loneliness among older adults. Specifically, it will synthesize evidence from randomized controlled trials to examine the effects of different types of arts-based interventions on loneliness and related outcomes in adults aged 60 years and older.

Rationale Loneliness is a common and important issue among older adults and is associated with a range of adverse psychological, social, and physical outcomes. In recent years, arts-based interventions have received increasing attention as potentially engaging and socially meaningful approaches to reducing loneliness in later life. These interventions may enhance emotional expression, social interaction, enjoyment, and sense of belonging. However, the existing evidence remains scattered across different intervention

types, settings, and outcome measures, and the overall effectiveness of arts-based interventions for loneliness in older adults is still unclear. A systematic review focusing specifically on randomized controlled trials is therefore needed to provide a clearer and more rigorous synthesis of the current evidence.

Condition being studied Loneliness is a subjective and distressing psychological experience that arises when individuals perceive a discrepancy between the social relationships they desire and those they actually have. It is distinct from objective social isolation, as an older person may have social contact yet still feel lonely if those relationships do not provide sufficient emotional closeness, belonging, or meaningful connection. In later life, loneliness is of particular concern because ageing is often accompanied by retirement, bereavement, declining physical function, reduced mobility, and shrinking social networks. These changes may reduce opportunities for social participation and weaken

emotional support, reciprocity, and sense of purpose. Loneliness in older adults is therefore not merely an unpleasant feeling, but an important psychosocial health concern. Previous research has linked it to poorer psychological well-being, lower quality of life, depressive symptoms, cognitive decline, and adverse physical health outcomes. For this reason, loneliness is an important condition to address in evidence synthesis concerning older populations.

METHODS

Search strategy A systematic search will be conducted in Web of Science, Scopus, PubMed, Cochrane Library, CINAHL, PsycINFO, and CNKI. The search strategy will combine three core concepts: loneliness, older adults, and randomized controlled trials. The main English search terms will include “loneliness,” “lonely,” “loner,” and “solitude” for loneliness; “older adult*,” “aged,” “old age,” “elderly,” “octogenarian,” and “senior citizens” for older adults; and “RCT” or “randomized controlled trial*” for study design. Equivalent Chinese search terms will be used in CNKI based on the same conceptual framework. Database-specific search syntax will be applied as appropriate to each database. The planned final search date is February 8, 2026.

Participant or population This review will address older adults aged 60 years and above. Studies describing participants as older adults or elderly people will also be considered eligible when the reported mean age is 60 years or above. Participants may include community-dwelling older adults, nursing home residents, or older adults living in long-term care or similar care settings. The review will include healthy older adults as well as older adults with chronic conditions or mild to very mild dementia, provided that the study is not primarily focused on severe clinical or psychiatric conditions. Studies involving non-older populations, severe mental illness, marked cognitive impairment, or other severe clinical conditions that substantially alter the health profile of the sample will be excluded.

Intervention The review will evaluate arts interventions for alleviating loneliness among older adults. Based on an established classification framework, arts interventions may be grouped into five categories: performing arts (such as music, singing, and dance), visual arts (such as painting, sculpture, craft-based arts activities, and other visual creative activities), literary arts (such as creative writing, poetry-related activities, and other literary creative activities), cultural arts activities

(such as museum visits, concert participation, and other forms of cultural participation centered on artistic experience), and digital or film-based arts activities (such as animation, filmmaking, and other digital arts activities). In addition to these categories, other interventions that contain explicit and identifiable arts components will also be taken into consideration.

Comparator Eligible comparators will include no intervention, wait-list control, usual care, usual activities, health education, and other non-arts interventions. Studies comparing an arts intervention with another active non-arts intervention will also be considered eligible.

Study designs to be included Only randomized controlled trials will be included. Non-randomized studies, quasi-experimental studies, observational studies, and qualitative studies will be excluded.

Eligibility criteria Additional eligibility criteria will be as follows. Eligible records will be limited to full-text articles published in peer-reviewed journals and to studies published in English or Chinese. Studies published outside the predefined 10-year search period will be excluded. Studies in which loneliness is referred to only in the introduction, discussion, or recommendations for future research, but is not actually measured and reported as an outcome, will be excluded. Books, conference papers, theses, reviews, and study protocols will also be excluded.

Information sources The information sources for this review will primarily consist of major international and Chinese electronic databases, including Web of Science, Scopus, PubMed, Cochrane Library, CINAHL, PsycINFO, and CNKI. These sources were selected to ensure broad coverage across medicine, nursing, psychology, public health, and Chinese-language literature relevant to older adults, loneliness, and intervention research.

Main outcome(s) The main outcome of this review is loneliness, as measured by validated loneliness assessment tools reported in the included randomized controlled trials. The review will primarily examine loneliness outcomes at post-intervention. Intervention effects will be interpreted mainly on the basis of reported between-group differences. In trials using active comparator conditions, within-group changes in the arts intervention group will also be considered, where appropriate, as supplementary evidence of improvement, but will be interpreted separately from evidence of superiority over the comparator.

Data management All records retrieved from the database searches will be imported into EndNote 20 for reference management and duplicate removal. After de-duplication, the remaining records will be screened in stages according to the predefined eligibility criteria. Screening decisions and extracted data will be recorded in Excel spreadsheets using a structured and standardized format. Two reviewers will independently and blindly conduct the screening and data extraction, and the results will be cross-checked for consistency. Any disagreements will be resolved through discussion with a third reviewer until consensus is reached. This process is intended to support transparent documentation and consistent handling of screening and extraction decisions.

Quality assessment / Risk of bias analysis The methodological quality of studies meeting the screening criteria will be assessed using the Cochrane Risk of Bias 2 tool. RoB 2 evaluates five domains: the randomization process, deviations from intended interventions, missing outcome data, measurement of the outcome, and selection of the reported result. Each domain will be judged as low risk, some concerns, or high risk of bias, followed by an overall risk-of-bias judgment for each study. Two reviewers will independently and blindly complete the risk-of-bias assessment using the RoB 2 Excel tool. Any disagreements will be resolved through discussion with a third reviewer until consensus is reached. Studies judged to be at overall high risk of bias will be excluded from the review.

Strategy of data synthesis A structured synthesis will be undertaken to integrate the findings of the included studies. Meta-analysis will not be conducted if substantial heterogeneity is identified across studies in terms of intervention type, participant characteristics, settings, comparator conditions, loneliness measures, and outcome reporting. The included studies will be systematically compared and integrated according to study characteristics, types of arts interventions, implementation features, comparator conditions, loneliness assessment methods, and reported effects on loneliness. Where appropriate, studies will be grouped by intervention category, study characteristics, and direction of effect to identify patterns of consistency and difference across the evidence base. Methodological quality and risk of bias will also be considered when interpreting the overall strength and consistency of the findings.

Subgroup analysis If the included studies are sufficiently comparable in terms of intervention type, comparator conditions, outcome

measurement, and reporting format, subgroup analyses will be considered to explore potential differences in intervention effects across study characteristics. Prespecified subgrouping factors will include type of arts intervention, implementation setting, comparator type, intervention duration and frequency, and participant characteristics. If the number of included studies is insufficient or heterogeneity is too substantial, formal subgroup analyses will not be conducted; instead, stratified comparison and integrated interpretation will be undertaken.

Sensitivity analysis If the included studies are suitable for quantitative synthesis, sensitivity analyses will be conducted to examine the robustness of the overall findings by excluding studies at high risk of bias, excluding studies with small sample sizes, or comparing results under different statistical approaches where appropriate. If quantitative synthesis is ultimately not undertaken, formal sensitivity analyses in the traditional sense will not be performed. Instead, the robustness of the review conclusions will be evaluated through comparison of study characteristics, risk of bias assessments, and consistency of the overall evidence.

Language restriction Studies published in English or Chinese will be included.

Country(ies) involved China; Malaysia.

Keywords Older adults; Loneliness; Arts interventions; Randomized controlled trials; Systematic review.

Contributions of each author

Author 1 - Peiyu Zhu - ZPY conceptualized the review, developed the methodology, designed the study protocol, conducted the literature search, screened the studies, performed the data extraction and analysis, and drafted the manuscript.

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Author 2 - Kim Geok Soh - KGS contributed to the study design, provided methodological oversight, supervised the research process, and critically revised the manuscript.

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