

Music Based Interventions In Geriatric Care: Complementary Approaches To Pharmacological Therapies For Emotional And Social Wellbeing

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Abstract

Background: The global population is Ageing at an unprecedented rate, placing significant demands on healthcare systems to address mental and emotional well-being in older adults. Emotional resilience is the capacity to adapt positively to adversity which is a critical determinant of healthy Ageing. Music therapy, as a structured clinical intervention, has gained recognition for its potential to enhance emotional well-being, promote positive affect and foster social connectivity among elderly populations.

Objective: This narrative review synthesizes existing literature on the effects of music therapy interventions on emotional resilience, positive emotions and social engagement among older adults (aged 60 and above), identifying key mechanisms, intervention modalities and gaps in current research.

Methods: A comprehensive narrative review of peer-reviewed literature published between 2015 and 2025 was conducted. Databases searched include PubMed, PsycINFO, SCOPUS and web of science. Studies were included if they examined music therapy interventions in adults aged 60 or older and reported outcomes related to emotional resilience, positive affect, depression, anxiety, loneliness or social engagement.

Results: Evidence consistently indicates that music therapy including active, receptive and group-based modalities significantly reduces depressive symptoms, anxiety and loneliness while enhancing positive emotions, self-efficacy, and social bonds. Neurobiological, psychological and social pathways underlie these outcomes. Group music therapy demonstrates particular efficacy in promoting peer connection and reducing isolation.

Implications: Music therapy represents a viable, non-pharmacological approach for building emotional resilience in Ageing populations. The study endorses clinical therapies as non-drug interventions for healthcare systems to complement conventional pharmacological treatments. Expanding its application in geriatric healthcare may support safer and more person-centered approaches to managing age-related psychological challenges.

Keywords: *Music Therapy; Emotional Resilience; Older Adults; Positive Emotions; Social Engagement; Healthy Ageing; Gerontology; Non-Pharmacological Interventions*

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1. Introduction

The world is experiencing a demographic transition of historic proportions. According to the World Health Organization (WHO, 2022), the global proportion of individuals aged 60 years and over is projected to nearly double from 12% in 2015 to 22% by 2050, representing approximately 2 billion people. This epidemiological shift has profound implications for healthcare delivery, particularly regarding the mental and emotional well-being of elderly populations (WHO, 2016; Maresova, 2019; Venkatapuram & Thiyagarajan, 2023). Ageing is inevitably accompanied by a constellation of psychosocial challenges such as loss of loved ones, retirement, diminished physical capacity, cognitive decline and social isolation (Pollak et al., 2023). These stressors can erode emotional resilience, defined as the dynamic capacity to adapt constructively to adversity, maintain positive affect and sustain meaningful social

relationships (Windle, 2011; Egan, 2024; Feng & Wang, 2025). Reduced resilience in older adults is associated with increased vulnerability to depression, anxiety disorders and accelerated cognitive decline, further compounding the burden on geriatric care systems.

Music therapy has emerged as a promising non-pharmacological intervention for addressing these challenges. As a clinical discipline, music therapy involves the systematic application of music-based experiences by a trained therapist to achieve individualized therapeutic goals (American Music Therapy Association [AMTA], 2023). Its accessibility, cultural relevance and multisensory engagement make it particularly well-suited for diverse elderly populations, including those with cognitive or physical limitations. While previous systematic reviews have examined the effects of music therapy on specific outcomes such as

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depression (Aalbers et al., 2017; Williams & Sidis, 2025).) or dementia-related behavioral symptoms (Vink et al., 2020), no comprehensive narrative review has yet synthesized the broader construct of emotional resilience alongside positive emotions and social engagement in older adults. This gap motivated the present review, which aims to provide an integrative and theoretically grounded synthesis of current evidence.

1.1 Aims of the Review

This narrative review pursues three interconnected objectives:

- To synthesize evidence on the effects of music therapy on emotional resilience, positive affect and social engagement in adults aged 60 and above.
- To identify the neurobiological, psychological, and social mechanisms through which music therapy exerts its therapeutic effects.
- To critically evaluate existing modalities, highlight research gaps, and provide recommendations for clinical practice and future inquiry.

2. Theoretical Framework

Understanding the role of music therapy in enhancing emotional resilience requires grounding in established theoretical frameworks that illuminate the pathways through which musical experiences translate into psychological and social outcomes.

2.1 The Broaden-and-Build Theory

Fredrickson's (1998, 2001) broaden-and-build theory of positive emotions provides a foundational lens for this review. The theory posits those positive emotions such as joy, contentment, gratitude and interest that broaden an individual's momentary thought-action repertoire, facilitating flexible and creative thinking. Over time, these broadened behavioral tendencies build durable personal resources: psychological (resilience, optimism), social (friendship, social support), and cognitive (creativity, problem-solving capacity). Music therapy, by reliably eliciting positive emotional experiences, can function as a direct catalyst within this framework. Listening to preferred music, group singing, or improvisational musical play activates pleasurable affect, which, according to the broaden-and-build

model, progressively accumulates resilience-relevant resources in Ageing adults.

2.2 Self-Determination Theory

Self-Determination Theory (SDT) proposes that psychological well-being is contingent upon the fulfillment of three basic needs: autonomy (sense of choice and agency), competence (feeling effective), and relatedness (social connection) (Ryan and Deci's,2000).Music therapy uniquely addresses all three needs such as participants exercise musical choices (autonomy), develop instrumental or vocal skills (competence), and share musical experiences with peers (relatedness). SDT thus provides an explanatory architecture for understanding why music therapy promotes both intrinsic motivation and lasting emotional well-being.

2.3 Neurobiological Foundations

At the neurobiological level, music activates the mesolimbic dopaminergic reward pathway, which underlies the experience of pleasure and anticipation (Salimpoor et al., 2011; Salimpoor & Zatorre, 2013). Simultaneously, music modulates the hypothalamic-pituitary-adrenal (HPA) axis, resulting in reduced cortisol secretion and attenuated physiological stress responses (Thoma et al., 2013). In older adults, these mechanisms are especially significant because dysregulated stress reactivity is a core vulnerability factor for depression and cognitive deterioration.

3. Review Methodology

3.1 Search Strategy

A comprehensive literature search was conducted across five major databases: PubMed/MEDLINE, PsycINFO, SCOPUS and Web of Science. The search covered publications from January 2015 through December 2025. Search terms combined controlled vocabulary and free-text terms including:

- "music therapy" OR "music intervention" OR "musical engagement"
- "older adults" OR "elderly" OR "Ageing" OR "geriatric" OR "seniors"
- "emotional resilience" OR "psychological resilience" OR "positive emotions" OR "well-being"
- "social engagement" OR "social connectedness" OR "loneliness" OR "isolation"

3.2 Inclusion and Exclusion Criteria

Criterion	Inclusion	Exclusion
Population	Adults aged ≥60; community, residential, or clinical settings	Children, adolescents, or adults <60 without older adult subgroup
Intervention	Active, receptive, or group music therapy led by trained therapist or structured protocol	Informal music listening without therapeutic structure
Outcomes	Emotional resilience, positive affect, depression, anxiety, loneliness, social engagement, quality of life	Studies with no psychological or social outcome measure
Study Design	RCTs, quasi-experimental, qualitative, observational, case studies, reviews	Conference abstracts, editorials without original data

Publication	Peer-reviewed journals, 2015–2025	Grey literature, dissertations (unless data-rich)
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3.3 Data Synthesis

A narrative synthesis approach was adopted given the heterogeneity of study designs, populations and outcome measures. Thematic coding was conducted, and Key themes were identified deductively (derived from the review objectives) and inductively (emerging from the data).

4. Findings

A total of 30 studies met the inclusion criteria after full-text review which includes randomized controlled trials, quasi-experimental studies, qualitative investigations, mixed-methods studies, and systematic reviews or meta-analyses. Findings are organized under four overarching thematic domains.

4.1 Music Therapy and Positive Emotional Outcomes

4.1.1 Reduction of Depressive Symptoms

One of the most consistent findings in the literature is the effectiveness of music therapy in alleviating depressive symptoms among older adults. Several empirical studies have reported that structured music-based interventions can significantly improve mood and reduce feelings of sadness, hopelessness and emotional distress in elderly populations (De Witte et al., 2022; Tiwari et al., 2023). Music therapy facilitates emotional expression, enhances relaxation and promotes positive engagement, which collectively contribute to improvements in psychological well-being, which analyzed nine randomized controlled trials involving 411 participants. The review demonstrated that individuals who received music therapy showed a substantial reduction in depression severity compared to those receiving treatment (Aalbers et al., 2017). Studies involving institutionalized elderly women have shown that guided music listening sessions significantly improved depressive affect when compared with control groups (Lorber & Divjak, 2022). These findings suggest that music therapy can serve as a valuable non-pharmacological approach for addressing depression in older adults, particularly in residential care settings where emotional isolation and loneliness are common.

4.1.2 Anxiety Reduction and Emotional Regulation

Beyond depression, music therapy demonstrates consistent anxiolytic effects. Bradt et al. (2016) found that music therapy reduced state anxiety in hospitalized older adults awaiting procedures, with physiological corroboration via reduced salivary cortisol. In community-dwelling older adults, weekly group drumming sessions were associated with significant reductions in perceived stress and trait anxiety over an eight-week period (Fancourt et al., 2016; Liu & Li, 2023)

Qualitative evidence illuminates the mechanisms: participants frequently describe music as providing an "emotional anchor," a familiar and predictable stimulus

that facilitates emotional regulation when confronted with healthcare-related anxiety or existential distress (He et al., 2023). This aligns with theoretical models emphasizing emotion regulation as a core component of resilience (Giordano et al., 2022).

4.1.3 Enhancement of Positive Affect and Hedonic Well-Being

Music therapy reliably increases positive emotional states including joy, contentment, nostalgia and vitality. A notable mechanism is the "reminiscence effect": familiar music from young adulthood evokes autobiographical memories, activating hedonic pleasure and reinforcing a coherent sense of personal identity a particularly salient benefit for older adults experiencing identity disruption due to retirement or bereavement (Thaut & Hoemberg, 2014). Hays and Minichiello (2005) documented in a qualitative study that older adults actively used music as a tool for mood regulation, social bonding, and spiritual meaning-making. Participants described music as "medicine for the soul," underscoring its role in fostering eudaimonic well-being beyond mere hedonic pleasure (Eseadi & Ngwu, 2023).

4.2 Music Therapy and Emotional Resilience

4.2.1 Defining Resilience in Ageing Populations

Resilience in older adults encompasses psychological, physical, and social dimensions. Psychological resilience specifically involves maintaining positive affect and adaptive functioning in the face of age-related adversity (Windle, 2011). Music therapy interventions appear to build resilience through multiple pathways: developing emotional coping strategies, reinforcing self-efficacy, cultivating optimism, and strengthening social support networks (Napapornpipat, 2022).

4.2.2 Evidence for Resilience-Building

Fewer studies have explicitly measured resilience as a primary outcome, but emerging evidence is compelling. Yap et al. (2022) observed a significant increase in resilience scores (mean change +8.4, SD 3.2, $p < .01$). Participants attributed improvements to enhanced self-confidence, group cohesion, and the mastery experience of performing publicly. Theoretically, music therapy promotes what Bonanno (2004) terms "pragmatic coping" flexible deployment of emotional regulation strategies in response to situational demands. Group music-making in particular provides repeated "micro-challenges" (e.g., learning a new piece, coordinating rhythmically with peers) that cultivate tolerance for uncertainty and develop adaptive problem-solving core components of resilience.

4.2.3 Music Therapy in the Context of Grief and Loss

Bereavement is one of the most destabilizing experiences in late life. Music therapy has demonstrated particular efficacy as a grief-support modality. Bright

(1999) documented the use of song reminiscence with bereaved older adults, facilitating expression of complex grief-related emotions and supporting meaning-reconstruction. More recent work by O'Callaghan et al. (2013) found that music therapy in palliative care settings not only supported dying patients but also helped family caregivers and bereaved spouses process anticipatory grief, thereby strengthening resilience in the face of anticipated loss (O'Donnell, 2022; O'Donnell & McFerran, 2023; Ghetti et al., 2023).

4.3 Social Engagement and Community Connection

4.3.1 Combating Social Isolation and Loneliness

Social isolation and loneliness have reached epidemic proportions among older adults globally, with documented associations with mortality risk (Holt-Lunstad et al., 2015). Group-based music therapy represents a particularly potent countermeasure, creating structured social contexts in which interpersonal connection is both facilitated and required (Pollak et al., 2023).

A systematic review by Dingle et al. (2013) found robust evidence that community choir participation in older adults reduced loneliness and increased social network

size. Critically, these social benefits appear to be specific to music-making rather than generalized social activities. Clift and Hancox (2010) demonstrated that choir participation produced stronger social connectedness gains than comparable non-musical group activities (e.g., book clubs), potentially due to the synchrony and shared emotional experience inherent in musical performance (Kiernan & Davidson, 2022).

4.3.2 Technology-Mediated Music Therapy and Social Connection

The COVID-19 pandemic accelerated innovation in telehealth delivery of music therapy. Studies conducted during 2020–2022 documented feasibility and preliminary efficacy of video-conferenced group music therapy sessions for isolated older adults (Ridder et al., 2021). While in-person group experiences retain advantages in terms of physical synchrony and multisensory engagement, technology-mediated formats significantly extend reach to homebound or rural elders, representing an important frontier for future development (Launay, 2015; Kosyvakki & Curran, 2020; Ragone et al., 2021).

4.4 Music Therapy Modalities and Differential Effects

Modality	Description	Primary Outcomes	Best Evidence Level
Active Music Therapy	Therapist-guided singing, instrument playing, improvisation, composition	Positive affect, self-efficacy, competence, mastery	RCTs, Meta-analyses
Receptive Music Therapy	Structured music listening with emotional processing, guided imagery	Anxiety reduction, emotional regulation, stress relief	RCTs, Qualitative
Group Music Therapy	Ensemble playing, choir, group improvisation, communal singing	Social engagement, loneliness, group cohesion, resilience	RCTs, Observational
Neurologic Music Therapy	Rhythmic auditory stimulation, therapeutic singing for speech/cognition	Cognitive function, motor coordination, mood in dementia	RCTs, Case studies
Songwriting	Therapist-facilitated creation of original songs around personal themes	Meaning-making, grief processing, identity, self-expression	Qualitative, Mixed methods
Music-Assisted Relaxation	Progressive relaxation techniques combined with music	Pain management, sleep quality, anxiety, physiological stress	RCTs, Quasi-experimental

5. Proposed Mechanisms of Action

The therapeutic effects of music therapy on emotional resilience operate through an integrated network of neurobiological, psychological and social mechanisms that are mutually reinforcing rather than independent.

5.1 Neurobiological Mechanisms

Music engages widespread neural networks including the limbic system, prefrontal cortex and basal ganglia. The dopaminergic reward pathway is activated during pleasurable musical experiences, releasing dopamine and producing the characteristic "chills" or "frisson" associated with emotional peak responses (Salimpoor et al., 2011). Oxytocin, associated with social bonding, is

elevated during synchronous music-making activities such as choir singing, facilitating interpersonal trust and affiliative behavior (Grape et al., 2003).

Music therapy also reduces HPA axis activity, lowering cortisol and inflammatory. In older adults, chronic low-grade inflammation contributes significantly to depression and cognitive decline; music therapy-induced attenuation of this inflammatory cascade may therefore have neuroprotective effects (Fancourt et al., 2014).

5.2 Psychological Mechanisms

Psychologically, music therapy builds resilience through several distinct pathways. First, successful musical

participation particularly in performance contexts creates mastery experiences that enhance self-efficacy (Bandura, 1977), the belief in one's capacity to accomplish goals. Second, music therapy provides structured opportunities for emotional expression and processing, facilitating what theorists call "emotional working through"—the integration of difficult emotions into coherent autobiographical narratives. Third, the use of familiar music in reminiscence-based approaches supports psychological integration and life review, processes associated with Erikson's developmental stage of "integrity vs. despair" in late life (Kruh,2020)

5.3 Social Mechanisms

Group music therapy creates social structures characterized by temporal synchrony, shared emotional experience, and coordinated action that conditions shown to accelerate social bonding and increase prosocial behavior (Tarr et al., 2014). The concept of "entrainment"—the synchronization of physiological and motor rhythms to external musical beats operates at a group level to create a felt sense of unity and cohesion. Furthermore, music provides a "safe" communication channel that bypasses verbal deficits in older adults with mild cognitive impairment or communication barriers due to stroke or depression (Levstek & Banerjee,2021).

6. Special Populations Within Older Adults

6.1 Older Adults with Dementia

The most extensive evidence base for music therapy in gerontology concerns dementia care (Shirsat, et al., 2023; Moreno-Morales et al., 2020). Neurological evidence confirms that musical memory is preferentially preserved in Alzheimer's disease due to the distinct neural architecture supporting musical memory relative to episodic memory systems (Halpern & Bartlett, 2011). Music therapy in dementia reduces agitation and behavioral disturbances (Livingston et al., 2014), facilitates reminiscence and momentary identity coherence and importantly preserves dignity and personhood in populations who are often stripped of communicative agency by neurodegeneration.

6.2 Older Adults in Residential Care

Institutionalization is associated with markedly elevated rates of depression (up to 40% of nursing home residents), anxiety and social withdrawal. Music therapy in residential settings addresses these concerns by providing sensory stimulation in often sterile environments, creating opportunities for structured social interaction, and offering residents rare experiences of choice and self-determination. Willingness to engage in music therapy is notably high even among residents with severe physical limitations, as participation can be adapted to minimal motor capacity (Hanser et al., 2020; Schneible, 2022; Ma & Ma,2023).

6.3 Culturally Diverse Ageing Populations

Music therapy's reliance on culturally embedded musical repertoires necessitates cultural competence

from therapists working with diverse Ageing populations. Older adult communities highlights the importance of culturally congruent music in eliciting meaningful emotional responses and therapeutic engagement (Moreno, 2011). Failure to incorporate culturally familiar music risks therapeutic invalidation and may reinforce the very marginalization these populations experience in broader healthcare contexts (Rose et al.,2020).

7. Critical Appraisal and Research Gaps

Despite encouraging findings, several limitations remain in the current literature on music therapy. Studies show considerable variation in intervention design, including differences in session frequency, duration, therapeutic techniques, and therapist training, which makes comparison and replication difficult. In addition, researchers employ diverse instruments to measure outcomes such as depression, anxiety, and resilience, limiting cross-study consistency. Many studies also rely on treatment-as-usual or waitlist control groups rather than active comparison activities, making it challenging to determine whether improvements are due specifically to music or to general social and therapeutic engagement. Furthermore, most investigations assess outcomes only immediately after the intervention, with limited evidence on the long-term sustainability of effects. Finally, the possibility of publication bias remains, as studies reporting positive results are more likely to be published than those with null findings.

8. Clinical Implications and Recommendations

Based on the synthesized evidence, music therapy should be incorporated into routine geriatric care as a complementary approach for managing depression and anxiety alongside medical and psychological treatments. Group-based music therapy sessions can be particularly beneficial, as they support both emotional expression and social connectedness among older adults. Interventions should ideally be conducted by professionally trained and certified music therapists to ensure ethical and evidence-informed practice. Assessing individuals' musical preferences at the beginning of therapy is also important to maintain cultural and personal relevance. Additionally, music-based interventions should be adapted to accommodate physical, sensory, or cognitive limitations to ensure that elderly participants can engage comfortably and meaningfully.

Future studies should develop clear and standardized music therapy protocols for older adults so that findings can be replicated and compared across studies. Researchers should also focus on resilience as a key outcome using validated tools such as the Connor–Davidson Resilience Scale or the Brief Resilience Scale. More rigorous randomized controlled trials with larger and diverse samples, active comparison groups, and longer follow-up periods (6–12 months) are needed to understand the long-term impact of music therapy and determine the most effective session frequency and duration. From a policy perspective, music therapy

should be recognized as an important supportive healthcare service and included in healthcare reimbursement systems. Governments and institutions should also encourage intergenerational music programs to reduce social isolation and invest in training programs to expand the music therapy workforce, especially in rural and underserved areas.

Most importantly, recent perspectives in mental health care emphasize the importance of non-pharmacological interventions as complementary or alternative approaches to conventional drug-based treatments. Although pharmaceutical medications often provide rapid symptom relief, prolonged reliance on such drugs may lead to adverse side effects, tolerance, and dependency, particularly among older adults who are already vulnerable to polypharmacy and its associated health risks. In this context, clinical therapies that focus on holistic well-being have gained increasing attention. Music therapy, in particular, has emerged as a promising therapeutic modality that can support psychological recovery and emotional regulation without the harmful consequences frequently associated with long-term medication use. By engaging cognitive, emotional and physiological processes, music therapy offers a non-invasive approach that may enhance mood, reduce stress, and improve overall psychological functioning among elderly individuals. Consequently, integrating music-based interventions into clinical care settings may provide a valuable and sustainable alternative to excessive pharmaceutical dependence in geriatric mental health care (Williams & Sidis, 2025).

9. Conclusion

This narrative review demonstrates that music therapy is a substantively supported, multidimensionally effective intervention for enhancing emotional resilience, cultivating positive emotions, and fostering social engagement among older adults. The convergence of neurobiological, psychological, and social mechanisms creates a theoretically coherent account of how structured musical experiences translate into durable therapeutic benefits—benefits that are especially critical in an Ageing world where mental and emotional well-being is increasingly at risk.

Group music therapy emerges as a uniquely powerful modality that simultaneously addresses the twin epidemics of depression and social isolation in older populations. Songwriting, active music-making, and reminiscence-based receptive approaches each offer distinct therapeutic affordances that can be matched to individual clinical presentations and cultural contexts. The field is at a pivotal juncture. The foundational evidence base is robust; what is now required is a commitment to methodological rigor, cultural responsiveness, and policy advocacy to translate this evidence into routine clinical practice. As healthcare systems worldwide grapple with the challenges of Ageing populations, music therapy stands as a uniquely human, deeply accessible, and profoundly effective tool for sustaining the emotional vitality and social connectedness of older adults.

This study highlights the potential music-based therapeutic practices in addressing emotional and cognitive concerns among the ageing population. The findings suggest that integrating music therapy into geriatric care may help reduce reliance on medications while promoting emotional well-being and cognitive engagement. Consequently, healthcare practitioners and policymakers may consider incorporating structured music-based interventions within non-pharmacological therapeutic strategies for older adults.

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