

# Music and Dementia

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## Introduction

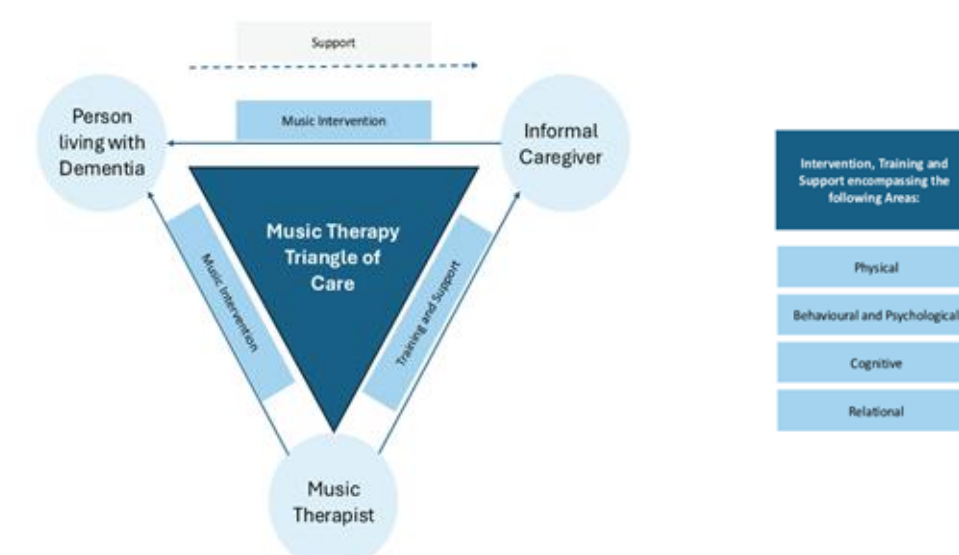
Dementia is a neurodegenerative disease that affects many older adults. This disease can have a variety of adverse symptoms, including many behavioral, emotional, and personality changes in addition to cognitive decline.

Research has been conducted to investigate the effectiveness of different forms of treatment, including both pharmacologic and non-pharmacologic. In this presentation, I will review the findings from recent research on the effects of an important non-pharmacological treatment, music-related intervention, for people suffering dementia.

Studies have shown that music, especially live music, is effective in managing dementia symptoms, including agitation and anxiety. A survey of these empirical studies may help us design evidence-based programs aimed to improve the quality of life among older adults with dementia.

## Music-Based Interventions

- Music Therapists sometimes work directly with clients, or in some cases provide training and support to the informal caregivers of the clients (Crabtree et al., 2025).



- Music therapy-related interventions can take many forms and lengths
  - ✓ 60-minute singing sessions
  - ✓ Live Music
  - ✓ Several hour-long listening sessions
  - ✓ Dancing to music

## Benefits on Cognitive Functions

- Increase in Cognitive functioning and communication (Tang et al., 2018)
- Increase short term and working memory, verbal recall, autobiographical memory, significant semantic recall, and total and remote recall (Irish et al., 2006; Meilän García et al., 2012; Pongan et al., 2017, 2020; Särkämö et al., 2014).

## Benefits on Psychological Functions

- Decrease in apathy (Tang et al., 2018): There was a significant decrease in apathy among those who participated in the musical intervention.
- Reduce anxiety, fear, and fatigue (Andersen et al., 2012; Ferrer et al., 2007).
- Increase emotional well-being and improve quality of life, especially for those who are institutionalized (van der Steen et al., 2017).
- Decreases mood disturbances related to anxiety and depression (van der Steen et al., 2017).

## Benefits on Behavior

- Decreases behavioral disturbances (Nair et al., 2013).
  - Behavioral disturbances, such as wandering, aggression, and paranoia, decreased by 40% after two weeks of musical interventions
  - More extreme behavioral disturbances, such as removing clothing and agitating others, also decreased

## Benefits on Social Functions

- Can increase positive engagement, even in those with moderate to severe dementia (Holmes et al., 2006)
- Decreases social isolation, especially for those with late-stage dementia (Clare et al., 2020)

### Communicative actions increased:

- Smiled at one of the musicians while another had a conversation with a musician
- Singing with others and looking and smiling at others

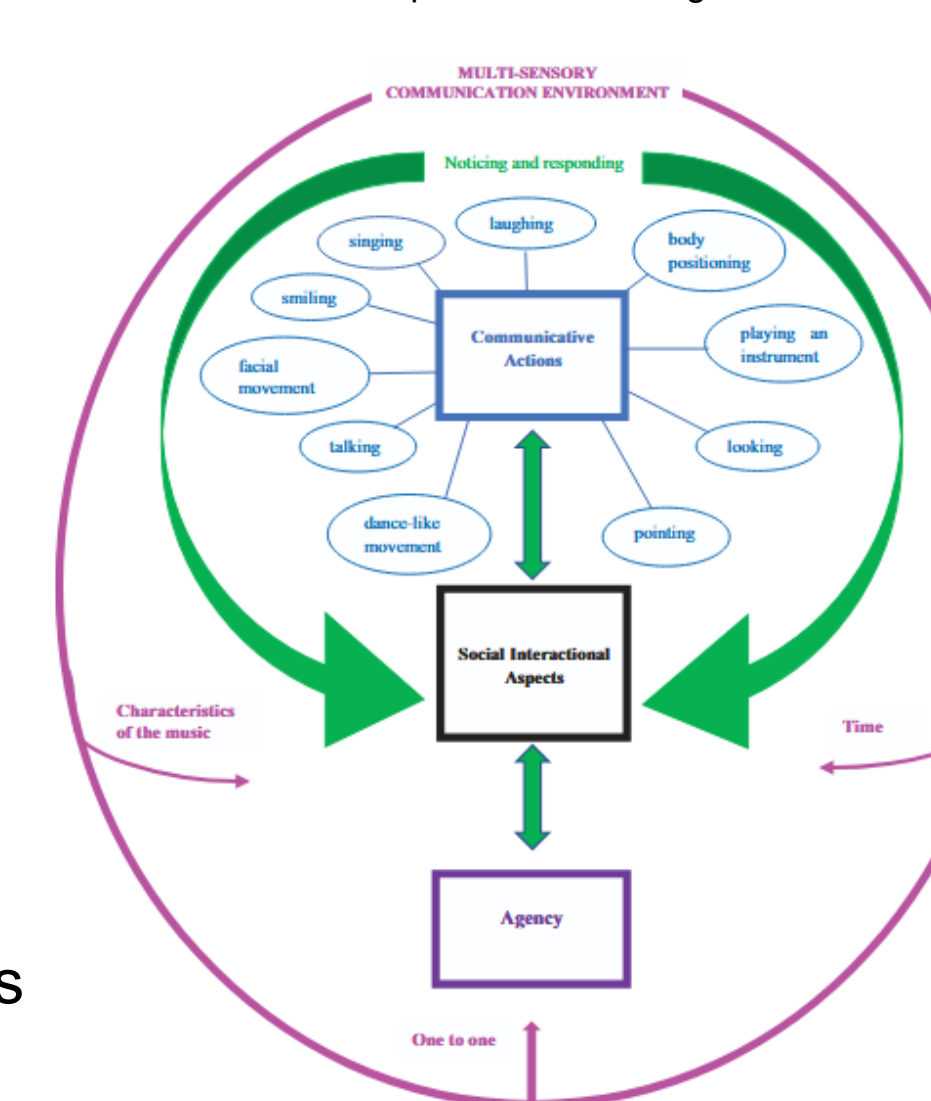
### Social interactional aspects improved:

- Increased turn-taking in interactions, mirroring, and using humor while communicating

### Agency increased:

- Agency was demonstrated in the live-music intervention by individuals deciding how they participated and also by contributing to the making of music

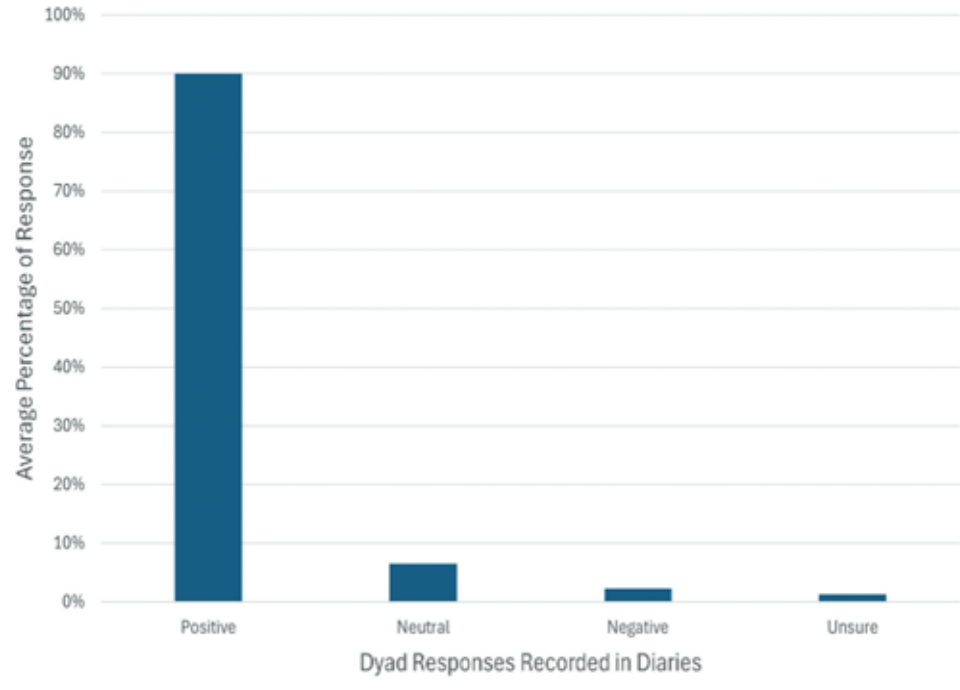
Multi-sensory Communicative Environment Through Music for People with Late-Stage Dementia



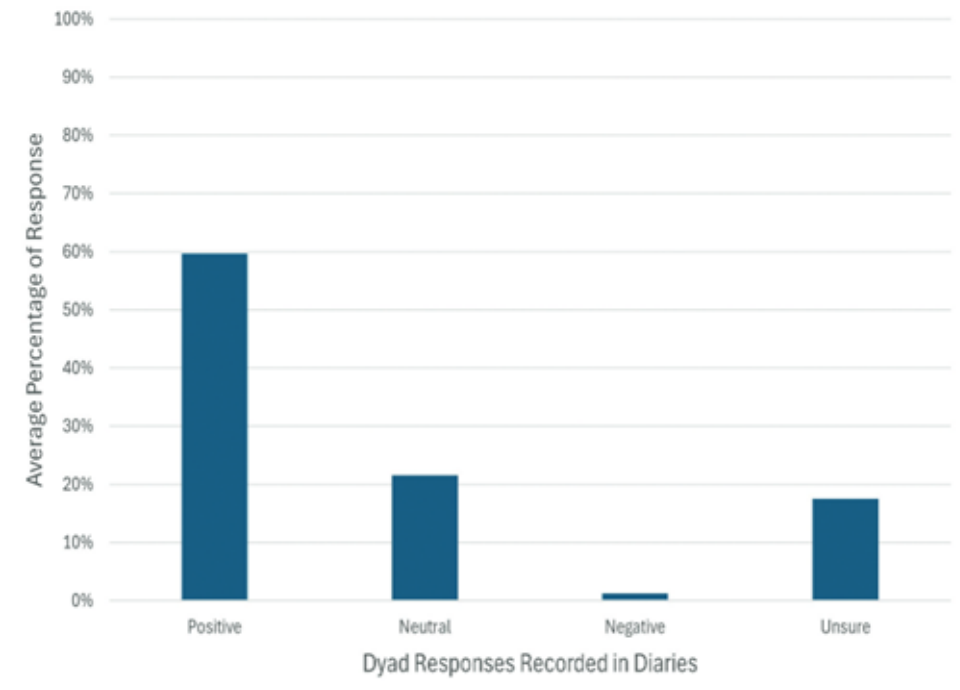
- Can build bonds between the individual with dementia and their informal caregiver (Crabtree et al., 2025; McMahon et al., 2023).

- These bonds include holding hands and other significant emotional interactions
- These bond-building shared experiences seemed to be positive, not only while the musical intervention was happening, but also throughout the rest of the day

Shared Experiences of Using Music



Effects of Music for the Rest of the Day

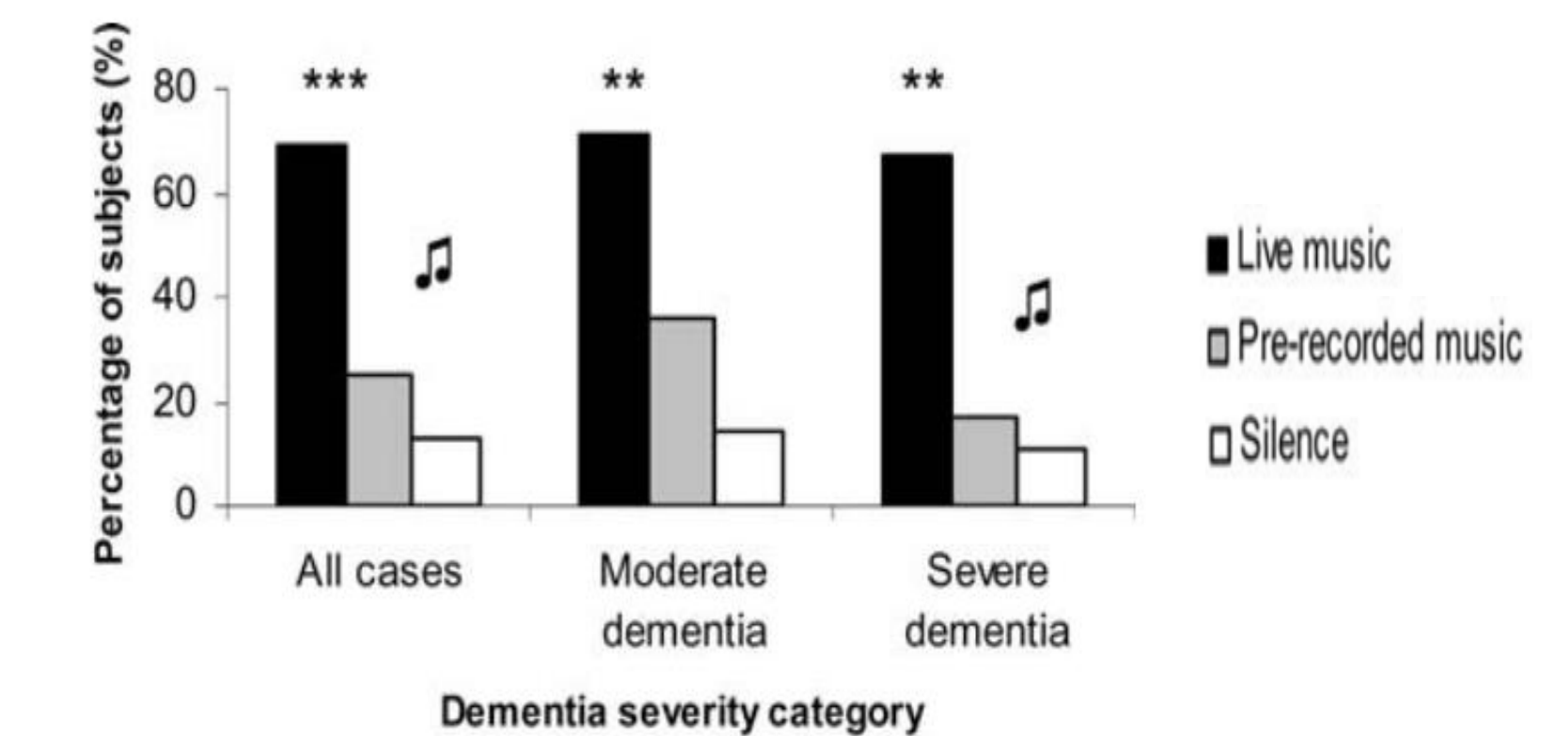


## Benefits Associated with Different Types of Music

- **Emotional music**
  - Can improve total and remote recall as opposed to unemotional music (Meilän García et al., 2012)
- **Singing-based interventions**
  - Can improve verbal recall (Pongan et al., 2017, 2020)
  - Can improve short term and working memory performance (Särkämö et al., 2014)
- **Listening-based interventions**
  - Can improve autobiographical and semantic memory recall (Irish et al., 2006)
- **Patient preferred music (Silverman et al., 2016)**
  - Can better build a client-therapist relationship
  - Can better match the client's needs
  - Can lower fatigue, anxiety, and increase relaxation (Andersen et al., 2012; Ferrer, 2007)

## Benefits Associated with Live Music

- More positive engagement than those exposed to pre-recorded music (Holmes et al., 2006).
- Can allow for social connections between musicians and listeners (Clare et al., 2020).
- Those who listened to live music showed more positive engagement than those who listened to pre-recorded music or sat in silence regardless of how severe the dementia was (Holmes et al., 2006).



## Conclusion

- While it is perhaps not a complete solution, music-related interventions show incredible promise in aiding those with dementia. It has a wide variety of benefits, from increased socialization to better recall and reduced emotional disturbances.
- It may be costly to hire a full-time music therapist. However, music-based interventions can take many forms. While a music therapist may be useful, depending on the situation, a more informal music-based intervention, such as listening to music, may be sufficient.
- Music-based interventions most likely should not fully replace other interventions and treatment, such as pharmacologic treatments, but it may be a useful addition into the repertoire of treatments.

## References

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