# Collective Heart-Coherence and Music-Based Intervention for Alzheimer’s Disease: A Pilot Protocol

## Abstract

Alzheimer’s disease (AD) is characterized by progressive cognitive decline, memory loss, and impaired quality of life. While pharmacological treatments remain limited, non-pharmacological interventions such as music therapy and caregiver-mediated emotional support have demonstrated promise in enhancing mood, reducing agitation, and eliciting transient improvements in memory and recognition.  
  
This paper proposes a novel, community-based pilot intervention: a 12-person “coherence circle” composed of family members, caregivers, and trusted individuals, who engage in collective heart-coherence practice while surrounding the person with AD. Sessions are structured to combine heart-focused breathing, group intention, and the use of personally meaningful music to stimulate residual memory pathways and foster emotional coherence. The hypothesis is that this combination may temporarily align the individual’s physiological and emotional state with the group field, producing measurable improvements in calm, recognition, and engagement.

## Background

- Heart-coherence: Research (e.g., McCraty & Childre, HeartMath Institute) demonstrates that intentional heart-focused breathing and emotional self-regulation can synchronize autonomic rhythms, reduce stress, and improve cognitive/emotional functioning.  
- Collective coherence: Preliminary studies suggest that group coherence practices amplify individual outcomes via social-physiological entrainment.  
- Music therapy: Multiple trials show that familiar, personally meaningful songs activate preserved neural networks in AD, often bypassing cognitive impairment to evoke emotion, autobiographical memory, and communication.  
- Gap: Few interventions combine these three elements (coherence, collective field, and music) into a structured, repeatable protocol for AD patients.

## Methods (Proposed Protocol)

### Participants

- 12 trusted individuals (family/friends/caregivers) + 1 person with AD (mild-to-moderate stage).  
- Caregiver consent required; participant assent sought when possible.  
- A clinician or trained facilitator present to ensure safety and track outcomes.

### Setting

- Familiar, quiet environment with comfortable seating.  
- Participant centrally placed; group arranged around them in a non-intrusive circle.

### Session Structure (20–30 min)

1. Grounding (3 min): Group breath practice (inhale 4 sec, exhale 6 sec).  
2. Coherence induction (5 min): Guided heart-focused breathing; participants hold intention of calm and love for the focal person.  
3. Music anchor (5–8 min): A song personally meaningful to the participant is played softly. Group hums or sings gently along to reinforce resonance.  
4. Silent holding (3–5 min): Group maintains coherence while observing participant’s response.  
5. Closing (2 min): Shared breath, verbal affirmation (e.g., “You are safe. You are loved.”).

### Frequency

2–3 sessions per week for 4–8 weeks.

## Outcome Measures

- Primary outcomes: Observable changes in mood, agitation, engagement, and recognition (measured by caregiver-rated scales such as the Neuropsychiatric Inventory – NPI, and video-coded behavioral analysis).  
- Secondary outcomes: Sleep quality, appetite, and caregiver stress (qualitative reports).  
- Exploratory: Heart-rate variability (HRV) monitoring of both participant and group members, to assess physiological synchronization.

## Hypothesis

Combining collective heart-coherence with familiar music in a 12-person circle will:  
1. Reduce agitation and increase calm.  
2. Elicit transient improvements in recognition, verbal communication, or emotional engagement.  
3. Enhance caregiver well-being by creating meaningful shared moments.

## Significance

If successful, this protocol could establish a low-cost, non-invasive adjunct intervention for Alzheimer’s care, leveraging existing social networks and evidence-based practices (music therapy + coherence training). Future studies could scale this approach to group programs in memory-care facilities and compare outcomes with standard music therapy.

## References

References to be added (e.g., McCraty & Childre on heart coherence, music therapy studies in AD, caregiver support literature).