# Effectiveness of Art, Music and Recreational Therapy on Symptoms and Quality of Life for Persons with Young-Onset Dementia: A Systematic Review

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# Background

- Early-onset dementia manifests before the age of 65, presenting unique diagnostic and caregiving challenges.
- Often associated with delays in diagnosis and can encompass cognitive, psychiatric and neurological aspects. Several symptoms include:
  - lapses in memory
  - changes in mood or personality
  - difficulty with perceiving depth or encountering other issues related to vision.
- A systematic review accessing the effectiveness of nonpharmacological interventions is necessary to provide necessary assistance and enhance the quality of life for persons with dementia.

## **Objective**

This research aims to identify the effectiveness of art therapy, music therapy and recreational therapy on the quality of life on persons with young-onset dementia.

#### Methods

- MEDLINE and OVID databases were searched. (May June 2020)
- Inclusion/exclusion criteria were applied (Table 1).
- 128 titles/abstracts screened by two reviewers; full-text articles retrieved and screened based on pre-established criteria above.
- A structured data extraction was conducted, and findings were organized based on the PICO framework.

#### **Table 1.**

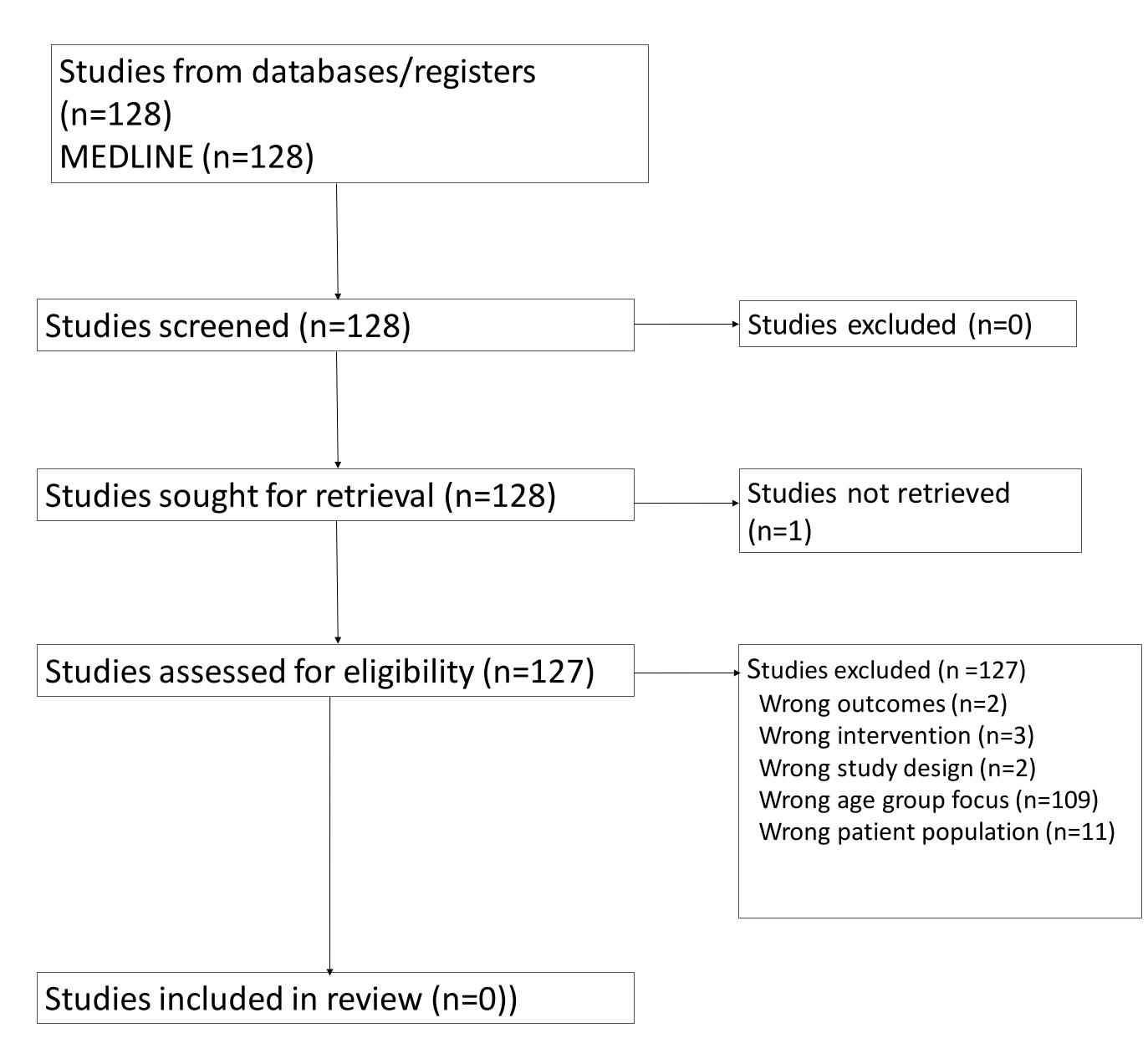
#### **Inclusion Criteria**

- Studies that involve individuals with early-onset dementia.
- Clinical trials or randomized controlled trials.
- Published in English.

# **Exclusion Criteria**

- Studies that involved the wrong study design.
- Systematic reviews.
- Recreational therapy that encompasses exercise therapy outside of community settings.
- Studies that exclusively presented participants' age data using mean and standard deviation measures, without any further data separation.

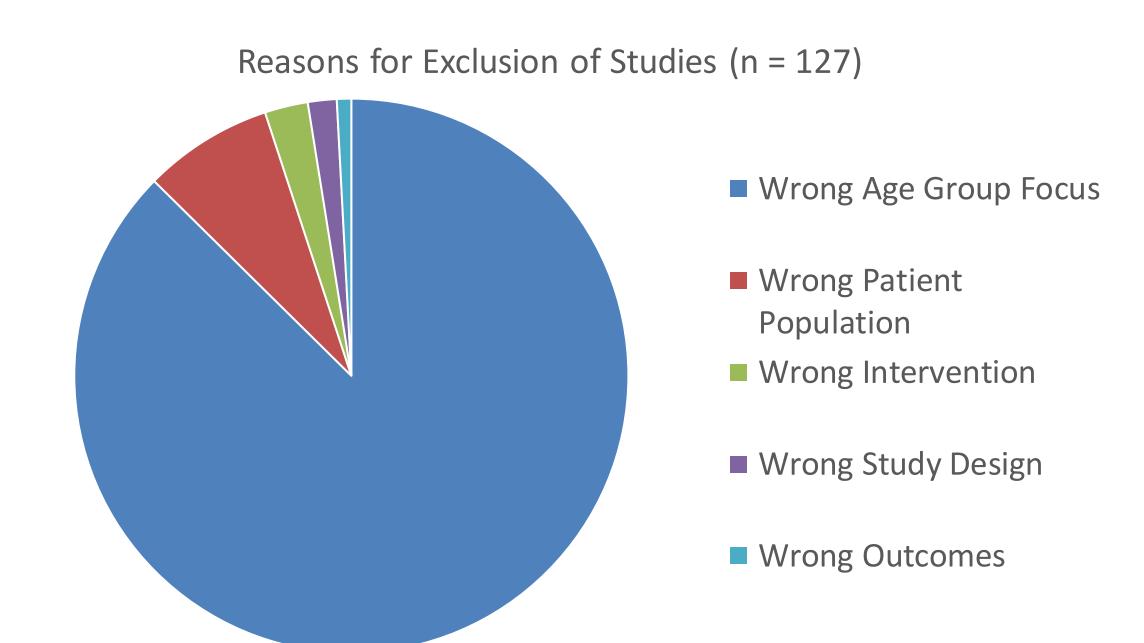
# Figure 1.: PRISMA Flowchart



# **Findings**

- A total of 0 studies were included in the analysis (Figure 1.)
- Among the 119 studies assessed for eligibility, only 6 of these studies assessed patients who are below 65 years of age. One of these studies met all the criteria (i.e., patients below 65 years of age, music therapy intervention, patients with dementia). However, there were no separate outcomes reported for the patients below 65 years of age.
- Majority of the studies exclusively reported on conditions related to dementia but distinct from dementia itself. (e.g., mild cognitive impairment (MCI), Huntington disease, Schizophrenia, etc.).
- Although some studies included participants below the age of 65 years, these studies did not further separate the experimental/control group and results based on age.
- Individually, one study that included two stratification groups: 45-55 years and 56-65 exclusively focused on caregivers of individuals with Alzheimer's disease. However, it did not provide explicit information regarding whether these caregivers were associated with cases of early-onset Alzheimer's disease.

### **Reasons of Exclusion Criteria**



#### **Conclusion**

Available data and studies of the effectiveness of art therapy, music therapy and recreational therapy on individuals with early-onset dementia is limited. Additionally, further research is needed to assess the effects of community-based recreational therapy programs beyond primarily exercise-based approaches. The outcomes of such evaluations will provide valuable insights into the broader integration of these non-pharmacological interventions and its long-term impacts with the potential to enhance the overall quality of life and support the maintenance of functional abilities in individuals dealing with early-onset dementia.

#### References

- 1. Early-Onset Alzheimer's disease. (2021, August 8). Johns
  Hopkins Medicine. https://www.hopkinsmedicine.org/health/conditions-and-diseases/alzheimers-disease/earlyonset-alzheimer-disease
- 2. Loi, S. M., Cations, M., & Velakoulis, D. (2023). Young-onset dementia diagnosis, management and care: a narrative review. *The Medical Journal of Australia*, 218(4), 182–189. https://doi.org/10.5694/mja2.51849
- 3. What are the signs of Alzheimer's disease? (n.d.). National Institute on Aging. https://www.nia.nih.gov/health/what-are-signs-alzheimers-disease