

# Preferred Music Listening Intervention Can Be Used to Address Behavioral and Psychological Symptoms of Dementia: A Scoping Review of the Literature

Shalini Ghurye, sgghurye@uh.edu

Faculty Mentor: Dr. Luis D. Medina, Department of Psychology



## Introduction and Background

**OBJECTIVE:** To systematically analyze the literature regarding the use of preferred music listening interventions as a nonpharmacological treatment for the behavioral and psychological symptoms of dementia (BPSD).  
**BACKGROUND:** The frequency of diagnoses of dementia is sharply increasing. Current pharmacological treatments used to subdue BPSD, such as antipsychotics, are known to cause adverse health effects. BPSD add to caregiver burden and can negatively impact the quality of life of persons with dementia (PWDs). Nonpharmacological treatments, specifically preferred music listening interventions, may potentially be able to address BPSD without incurring adverse health effects. **This study** examines the relationships between preferred music listening interventions and changes in BPSD in PWDs.

## Method

Inclusion Criteria for Studies:

- Music administered is tailored to participant’s preference
- Intervention is delivered to individuals diagnosed with dementia
- Use of pre-recorded, preferred music
- Observed changes in behavioral, psychological, and neuropsychiatric symptoms of dementia

Databases From Which Studies Were Located: EBSCOhost, National Center for Biotechnology Information, SAGE Journals, ScienceDirect Journals, PubMed, ProQuest, Cambridge Core, and Wiley Online Library.

Combinations of key phrases and terms related to preferred music, music-based intervention, individualized music, pre-recorded music, Music & Memory, and dementia were used to search databases.

Included studies (n=9) were categorized by similarities in interventions, after excluding studies as demonstrated in the following chart.

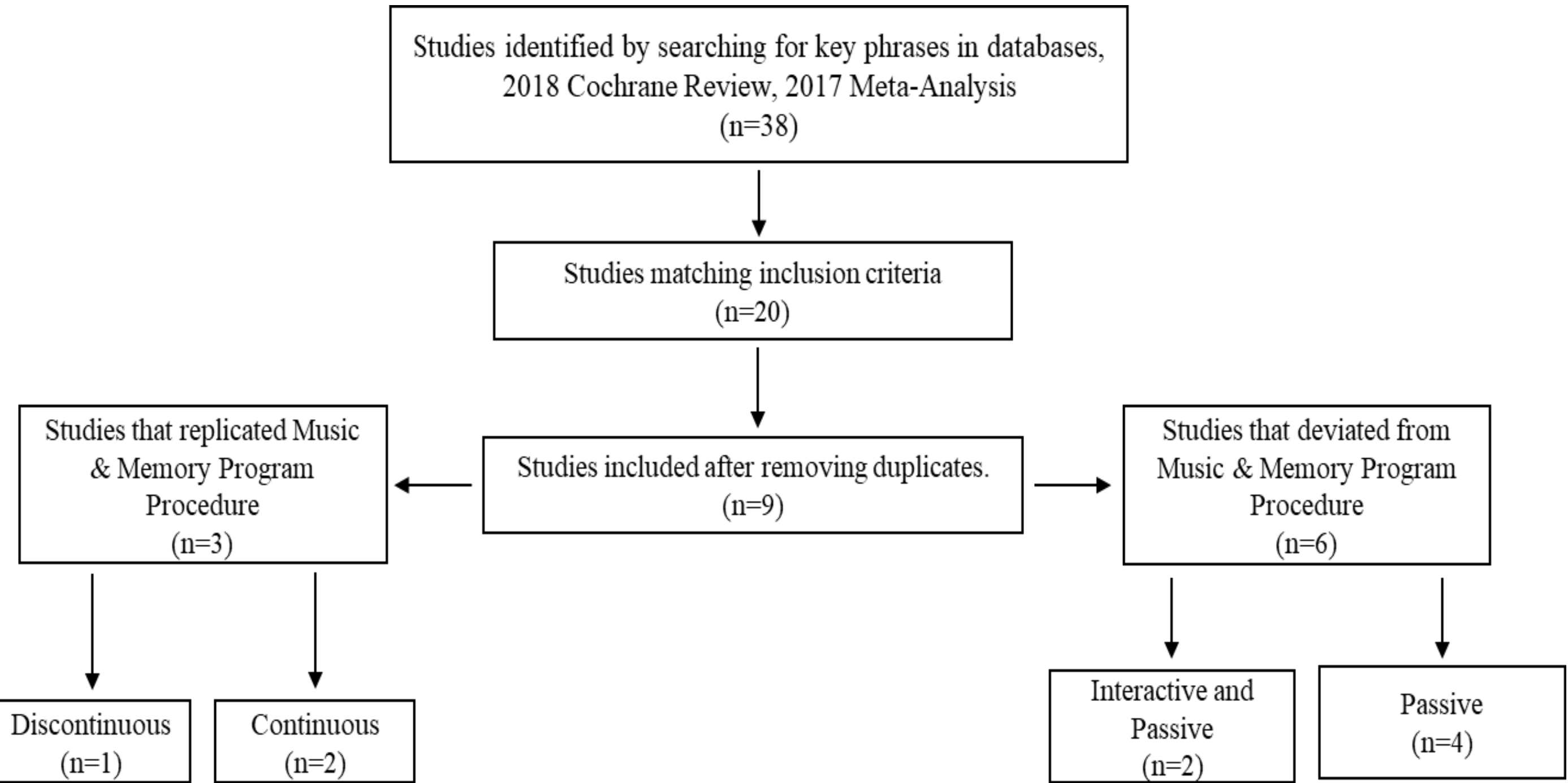
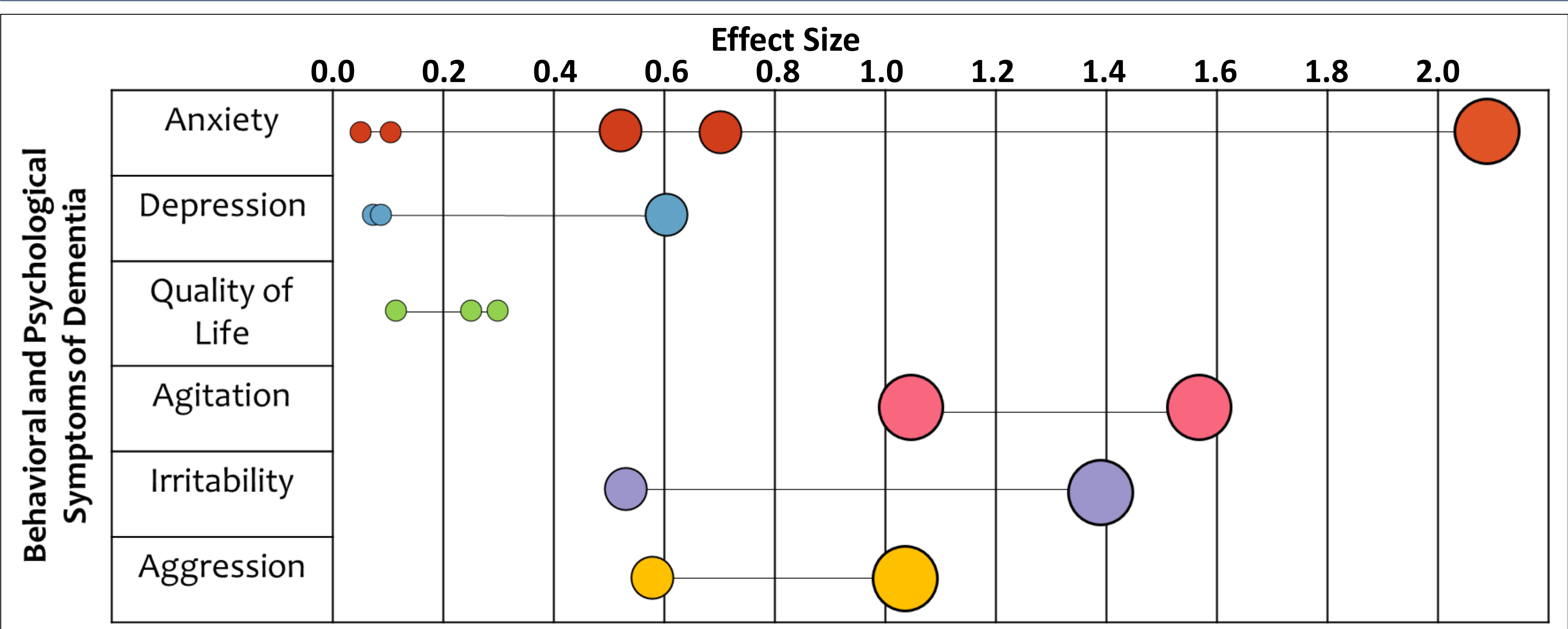


Figure 1: Flow chart depicting selection and categorization of studies.

For further questions, contact: sgghurye@uh.edu

## Results



Study and Year	Sample Size (n)	Intervention	Outcome Measures	Effect Size
Kulibert, et al. (2019)	24	Music & Memory (M&M) procedure, continuous.	Quality of life via BASQID.	BASQID: Small
Kwak, et al. (2020)	59	Music & Memory (M&M) procedure, discontinuous.	Agitation via CMAI, dementia-related cognitive-behavioral issues via NPI.	CMAI: No significant difference. NPI: Medium
Schroeder, et al. (2018)	41	Music & Memory (M&M) procedure, continuous.	Agitation levels, negative and positive mood.	Agitation level: Large Negative/Positive Mood: Large
Costa, et al. (2018)	113	Deviated from M&M, passive intervention.	Pain, anxiety, depression.	Pain: Small Anxiety: Medium Depression: Medium
Park, et al. (2009)	15	Deviated from M&M, passive intervention.	Agitation level before, during, and after intervention via modified CMAI-II.	CMAI-II Before v. During: Large CMAI-II Before v. After: Large
Raglio, et al. (2015)	120	Deviated from M&M, interactive and passive intervention.	Depression and quality of life.	No significant difference between groups.
Sakamoto, et al (2013)	39	Deviated from M&M, interactive and passive intervention.	Behavioral and psychological symptoms of dementia (BPSD).	Interactive v. Control: Medium to Large Interactive v. Passive: Small Passive v. Control: Medium to Large
Sung, et al. (2006)	65	Deviated from M&M, passive intervention.	Agitation via Overall CMAI.	CMAI Experimental v. Control: Medium
Sung, et al. (2010)	29	Deviated from M&M, passive intervention.	Anxiety, mean score.	Anxiety – Experimental Group: Very Large.

Key: Effect Size	
	Small
	Medium
	Large

**CONCLUSION:** The distribution of effect size suggests that preferred music listening interventions had a consistent large effect on agitation, irritability, and aggression in persons with dementia. However, several studies observed small effect sizes and non-significant results, which may be attributed to the variation in the methodology used across these studies. In order to determine whether preferred music listening interventions are a viable non-pharmacological approach to blocking out the environmental stimuli that normally triggers BPSD in PWD as well as the best method of implementing this intervention to yield statistically strong results, further research is necessary.

**FUTURE RESEARCH:**

- Identifying the relationship between different types of dementia and the effect of preferred music listening intervention on the frequency of BPSD in PWD.
- Evaluating the influence of a passive versus an interactive administration of preferred music listening interventions on the efficacy of this intervention in reducing the frequency of BPSD in PWD.
- Observing the effect of administering preferred music listening interventions at times of peak agitation versus at random times on the frequency of BPSD in PWD.