

Role of Musical Therapy in the Treatment of Alzheimer's Disease

Introduction

- Alzheimer's is the **leading cause of dementia** and the *fifth cause of death* in those 65 years of age and older.
- Alzheimer's causes progressive neurological decline, eventually leading to constant care from family and friends.
- This disease is a source of emotional, physical, and psychological stress on caretakers as well as a significant financial burden to patients, caretakers, and the healthcare system.
- Those suffering from Alzheimer's have twice as many hospital stays per year, thus greatly **increasing medical costs**.
- There is currently **no cure** for Alzheimer's.

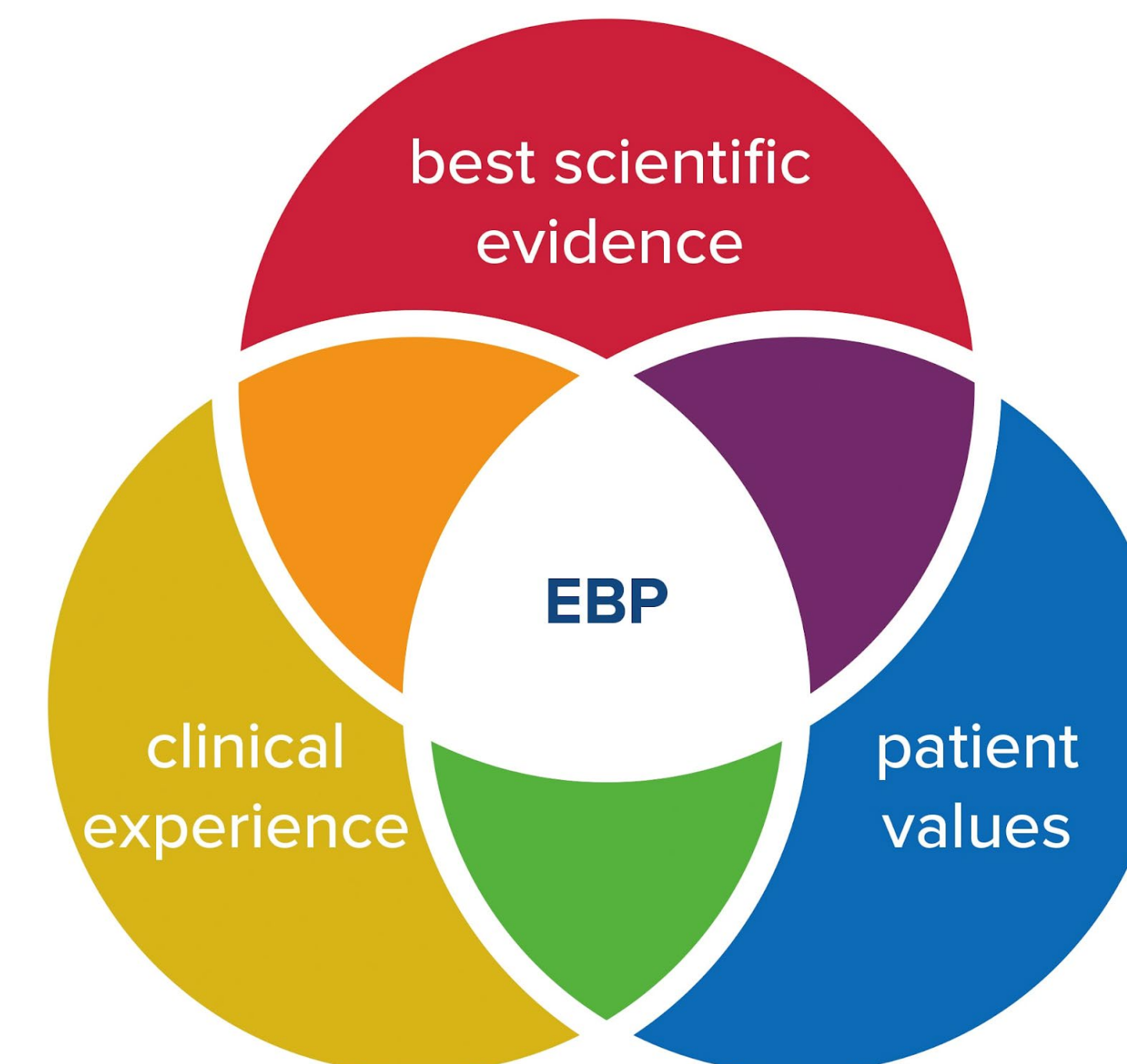
PICOT Question

In adults over age 60 with early-stage (mild) Alzheimer's disease (AD), does music therapy reduce cognitive decline (as measured by the ADAS-COG and CDR-SOB scales) in comparison with traditional oral medications (such as cholinesterase inhibitors [donepezil/Aricept®] or glutamate receptor antagonists [memantine/Namenda®]) within the first three years of treatment?

Inclusion Process

- A target range of publication dates was established based on when more traditional pharmaceutical treatments for Alzheimer's were developed.
- All keywords and Boolean operators were tracked based on the number of articles they produced
- The databases that were searched include: Google Scholar, PubMed, CINAHL Complete, UpToDate, NEJM, and Joanna Briggs Institute Database.
- Each article was classified as a level 1-5 research paper depending on the criteria listed on the Rapid Critical Appraisal Checklists in Appendix B of the textbook Evidence-Based Practice in Nursing & Healthcare (Melnyk & Fineout-Overholt, 2019).
- 16 articles that addressed the PICOT question were chosen to be analyzed. Of these, ten were classified as randomized control trials, one as a meta-analysis of Level 2 studies, three as literature reviews, and two as clinical practice guidelines.

Strength	Level	Design
High	Level 1	Randomized control trial (RCT)
		Meta-analysis of RCT with homogeneous results
	Level 2	Prospective comparative study (therapeutic)
		Meta-analysis of Level 2 studies or Level 1 studies with inconsistent results
	Level 3	Retrospective Cohort Study
		Case-control Study
		Meta-analysis of Level 3 studies
	Level 4	Case Series
		Level 5
Low	Level 5	Case Report
		Expert Opinion
		Personal Observation



Findings

- To date, existing treatments aim to preserve cognitive functioning. The most common treatments are cholinesterase inhibitors.
- Alzheimer's also presents with agitation, anxiety, and depression. Some research has focused more specifically on the benefits of non-pharmacologic options such as music therapy in treating these additional symptoms.
- Music therapy can lessen the prevalence of depression and anxiety in patients with Alzheimer's as well as show minor improvements to patients' memory recall and sense of orientation.

Recommendations

Because music therapy is shown to help patients with Alzheimer's patients in terms of reduction in rates of anxiety and depression; prevention of agitation; improvement in mood, appetite, and psycho-behavioral responses; and positive changes in relationships between patients and their caregivers, it would be advantageous for medical providers to **recommend adjunct music therapy as a non-pharmacologic treatment** to augment the benefits of pharmacologic treatments.

References

Melnyk, B. M., & Fineout-Overholt, E. (2019). *Evidence-based practice in nursing & healthcare: a guide to best practice*. Fourth edition. Philadelphia: Wolters Kluwer.