Managing symptoms of Alzheimer's disease: The efficacy of CAM therapies vs. pharmacological interventions

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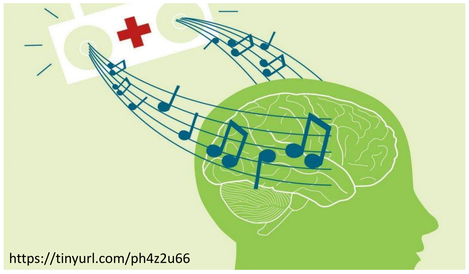


Question

In adults with Alzheimer's disease (AD), how does using traditional pharmacological therapies, compared to using complementary and alternative medicine (CAM) therapies, affect management of the symptoms of the disease?

Background

- AD is the sixth leading cause of death in the U.S. and the most common cause of dementia (Alzheimer's Association, 2021 b).
- AD is a degenerative brain disease, which primarily affects people over the age of 65 (Alzheimer's Association, 2021 b).
- There are three stages of AD, which include early, middle, and late (Alzheimer's Association, 2021 b).
- AD can affect independence through the manifestations of hallucinations, delusions, irritability, nighttime behavior disturbances & cognitive impairment (Keene et al., 2018).
- AD has no cure; alternative medicine (CAM) therapies & pharmacological therapies can be used to manage and improve symptoms.
- CAM therapies positively affect longevity, quality of life, & independence. Some therapies include herbal remedies, dietary supplements, medical foods, exercise, and music therapy (Alzheimer's Association, 2021 a).
- Pharmacological medications include Aricept, Exelon, Razadyne, Namenda & Namzaric (Alzheimer's Association, 2021 c).

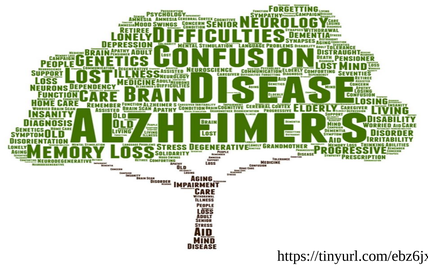
Article	Description	Findings
Effects of a stepwise multidisciplinary intervention for challenging behavior in advanced dementia: A cluster randomized controlled trial by Pieper et al., 2016.	• **Level II randomized control study** looking at how the STA OP! Protocol, five-step intervention is used to decrease challenging behavior and depression in patients with advanced dementia. Behavioral neuropsychiatric symptoms and agitation assessed with Cohen-Mansfield Agitation Inventory (CMAI) and the Neuropsychiatric Inventory for Nursing homes (NPI-NH).	• Results suggested the intervention worked better that the control. Participants were less likely to receive medications in the intervention group compared to control. • The implementation of STA OP! Intervention did improve overall agitation, depression, as well as other neuropsychiatric conditions.
Impact of antipsychotic review and nonpharmacological intervention on antipsychotic use, neuropsychiatric symptoms, and mortality in people with dementia living in nursing homes: a factorial cluster-randomized controlled trial by the well-being and health for people with dementia (WHELD) program by Ballard et al.	• **Level II randomized control study** involving people with dementia. • Measured nursing homes in the Untied Kingdom. • The impact of social interactions, exercise, person-centered care, and antipsychotic review as it related to people living with dementia.	• The article found significant improvement in neuropsychiatric symptoms using adjunct therapies when compared to the control group who received just pharmacological interventions.
Combining drug and music therapy in patients with moderate Alzheimer's disease: a randomized study by Giovagnoli et al.	• **Level II randomized control study**. Looking at adding active music therapy (AMT) to memantine (M) improves language compared to just taking acetylcholinesterase inhibitors (AchEI). Outcomes were Severe Impairment Battery Language (SIB-l), Activities of Daily Living (ADL) and Instrumental Activities of Daily Living (IADL) scales, (NPI), MMSE, and Lubben Social Network Scale (LSNS).	• AMT to pharmacotherapy had no further benefit to language and verbal communication compared to just pharmacotherapy in patients with moderate AD (Giovagnoli et al., 2018). • M-AMT group compared to the M group alone had an improvement in psychiatric symptoms.
Adding Chinese herbal medicine to conventional therapy brings cognitive benefits to patients with Alzheimer's disease: a retrospective analysis by Shi et al.	• **Level IV retrospective cohort study**. The study used data from medical records between May 2011 and August 2016. Mini-mental examination (MMSE every three months. The experimental group received conventional therapy with herbal medicine (CT+H) and the control group received just conventional therapy (CT): Donepezil and/or memantine.	• CT+H was significantly more effective than just CT alone. • Patients treated with CT+H had a stabilization of cognitive function after 24 months vs. just CT alone. • The distinction between CT and CT+H grows more profound over time.
Shiatsu as an adjuvant therapy for depression in patients with Alzheimer's disease: a pilot study by Lanza et al.	• **Level II single-blind, randomized, controlled study.** Does the combination of Shiatsu with physical activity standard-of-care was more effective in the outcome of depressed patients with mild to moderate AD in comparison to physical activity standard of care alone. Outcomes were measured by: GDS, ADL, IADL, and MMSE.	• Improvement in the activity group compared to the control group. The GDS outcome showed a significant improvement. Other outcomes were not statistically significant. Adding Shiatsu to standard pharmacological and physical interventions significantly reduced depression in patients with AD.
Management of behavioral symptoms of dementia in a specialized unit care by Saidlitz et al.	• **Level IV peer reviewed, prospective study with systemic analysis of data.** The aim of the study was looking at progression of behavioral symptoms, autonomy, and psychotropic drug prescriptions at a cognitive and behavioral unit in Toulouse, France. Autonomy, psychological, and behavioral symptoms measured ADL, NPI NH scale at admission and discharge.	• No significant loss of autonomy on the ADL Scale for 'walking.' Significant improvement in the mean NPI NH scores after discharge. Some disruptive symptoms were significantly decreased when patients were under care. Depression and anxiety symptoms improved throughout care.

Results

- The use of nontraditional therapies like dance, music therapy, herbal remedies, and shiatsu massage in conjunction with traditional AD medications can improve symptoms temporarily r/t to the disease and possibly improve quality of life.
- However, the combination of therapies was shown to be temporary. Long term effects were not seen, and patients deteriorated after therapies were stopped.

Nursing Implications

- CAM therapies with the addition to traditional pharmacotherapy, has been shown to have an effective way to diminish AD symptoms in mild and moderate cases.
- Most of the studies appraised were found to be overseas. Therefore, studies to be taken place in the U.S. would be helpful to establish more concrete research for nurses and healthcare professionals to work in the future.
- Nurse need to advocate for their patients and the effectiveness of CAM with pharmacological therapy in long-term care facilities to reduce AD symptoms, such as: behavior, ability to perform ADL's, depression, agitation, cognitive function, and difficulty in language/speaking.
- Nurses can also have research studies like the ones appraised to determine more long-term effects of these therapies as most of them went on for a couple months.



This work is not an original. This is an evidence-based practice brief that includes published research conducted by professionals. Guidance was provided by Stephanie Burkholder, professor of NU307: Evidence-Based Practice Research Methods.

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