The Effect of Art Based Therapies on Alzheimer's Disease

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INTRODUCTION OF
ALZHEIMER'S DISEASE

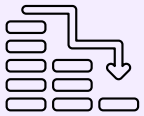
- Brain disorder
- Reduces cognitive function (e.g. thinking, memory, reasoning).
- Risk increased by lifestyle stress and genetics
- Characterized by increased amyloid beta aggregates
- Can negatively affect a person’s daily life, such as impairing the ability to think and act rationally, and can even lead to death.

THERE IS CURRENTLY **NO CURE** FOR ALZHEIMER'S DISEASE

CURRENT TREATMENTS FOR MILD - MODERATE ALZHEIMER'S

Cholinesterase inhibitors

Prevent the breakdown of acetylcholine.
Acetylcholine is a brain chemical believed to be important for memory and thinking



Reduce Amyloid Plaques

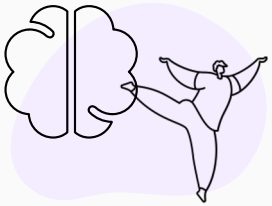
Immunotherapy drugs that target protein beta-amyloid to help reduce amyloid plaques, one of the hallmark brain changes in Alzheimer's

CURRENT TREATMENTS FOR MODERATE-SEVERE ALZHEIMER'S

NMDA Antagonist

Regulating glutamate, a brain chemical that may lead to brain cell death when produced in excess

Different Types of Art Therapies



Dance

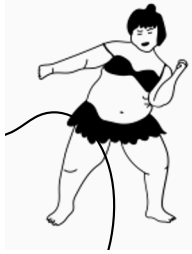
Dance, Physical Movement

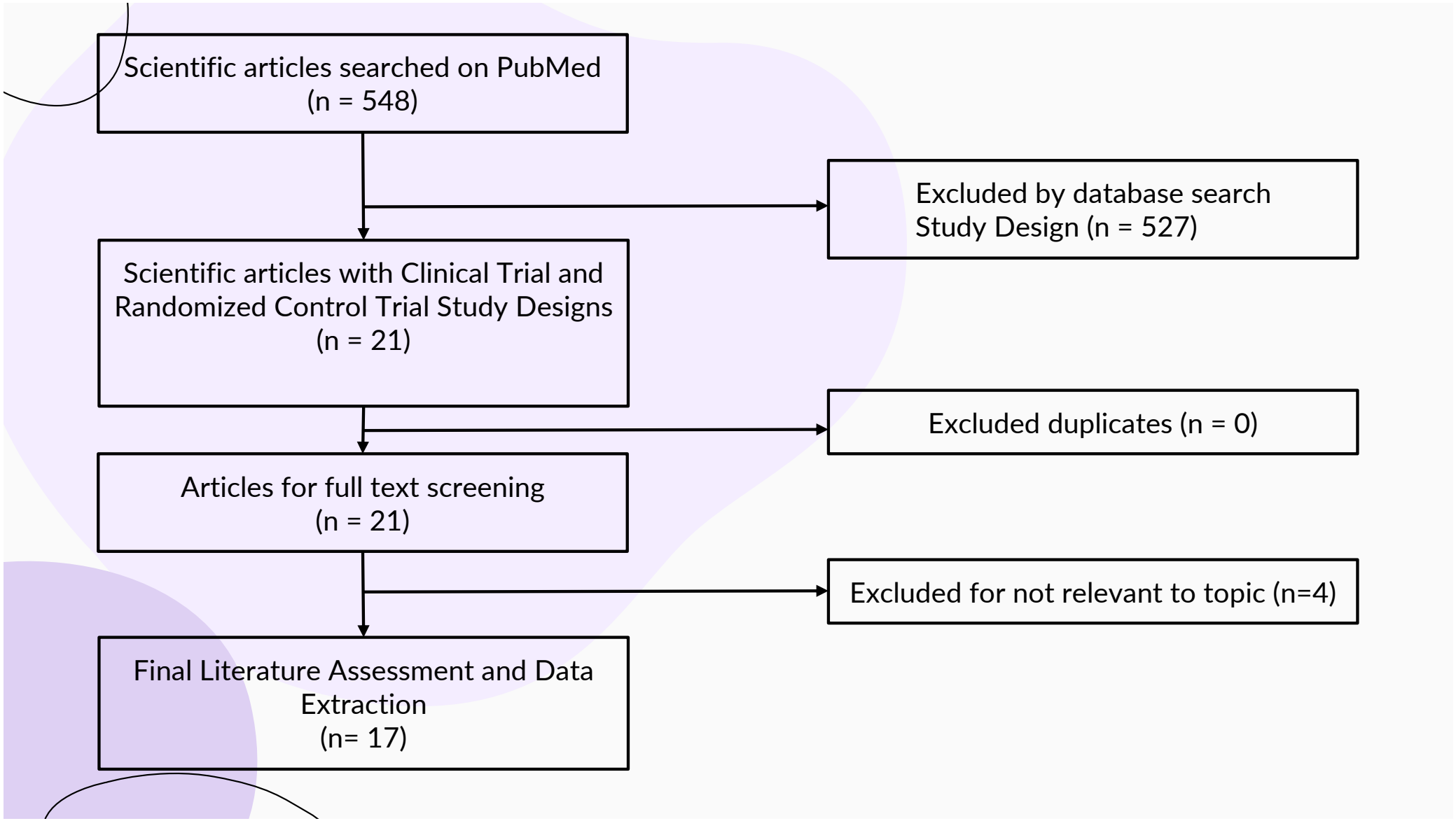
Music

Listening

Art

Drawing & painting




Scientific articles searched on PubMed
(n = 548)
Excluded by database search
Study Design (n = 527)
Scientific articles with Clinical Trial and
Randomized Control Trial Study Designs
(n = 21)
Excluded duplicates (n = 0)
Articles for full text screening
(n = 21)
Excluded for not relevant to topic (n=4)
Final Literature Assessment and Data
Extraction
(n= 17)

01.

DANCE THERAPY

Dance, movement, physical activity

Findings on Dance Therapy

- Tango intervention on healthy middle-aged African American women with parental history of Alzheimer's Disease
  - Improvements in whole-body spatial cognition and short-term and working memory, and reduced deterioration of executive function
- Greater improvement in visual memory and new learning in 18-35 year olds with Down Syndrome
  - 70% of people with Down Syndrome develop Alzheimer's Disease
- Aerobic exercise (walking and dancing) on healthy older adults: increase in white matter signal
  - Correlated with improved episodic memory

02.

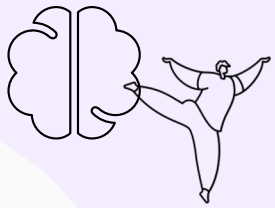
MUSIC THERAPY

Listening to music

Music Therapy as a Potential Intervention

- Innes 2016, 2017, 2018
  - Music listening, for even as short as 12 minutes per day improved
    - Memory function
    - Stress levels
    - Sleep quality
  - Lower increase in plasma AB42/AB40 ratios (AD biomarker)
  - Increase in telomerase activity and telomere length (markers of cellular aging)
  - Music listening was less effective than Kirtan Kriya meditation therapy
- Gerdner 2005
  - Significant reduction in agitation using individualized music program compared to classical music
- Kwak 2018
  - Little or no effect on improving resident outcomes in the areas of agitation, mood, and medication
- Papers show mixed results

CONCLUSIONS



Dance Therapy

Trends show improvements in memory, whole-body spatial cognition and reduced deterioration of executive function

Music Therapy

Possible improvements in Memory, Executive function, Sleep quality, lowered stress levels

Inconclusive results

Art Therapy

Needs More Research!

Future Directions for Art Based Therapies for Alzheimer's

01.

Compare combination of therapies

Effectiveness of combination of art-based therapies and other psychotherapies/medication treatment

02.

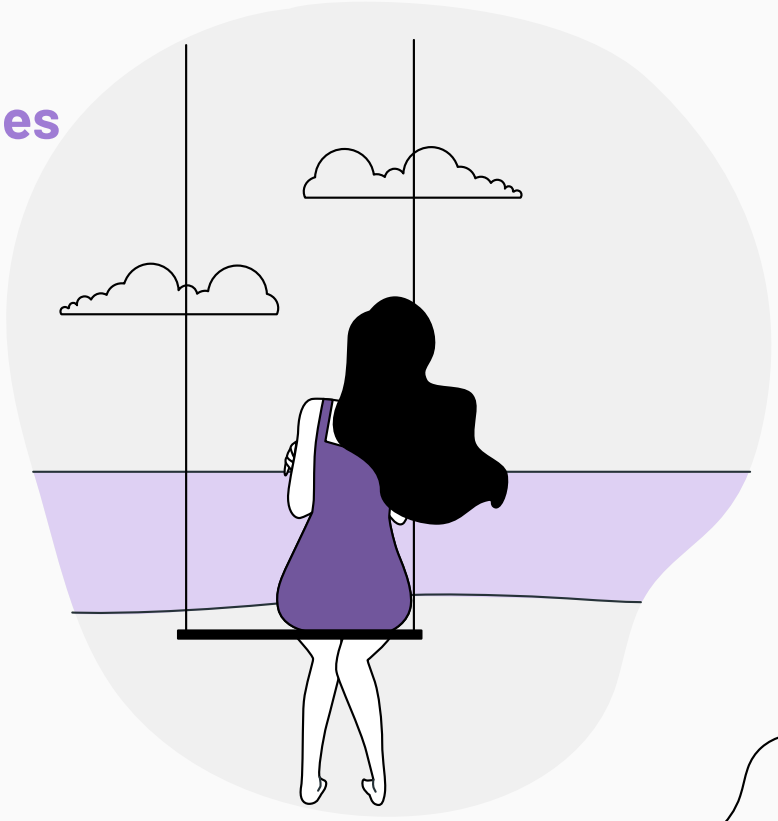
Technology-based treatment

Benefits of technology-based interventions, such as virtual reality or computer-based art programs

03.

More INFO!!!

Must have more information to prove conclusive benefits and to influence clinical care to include art-based therapies in structured treatment plans



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THANK YOU!