

Abstract

Alzheimer's disease is an irreversible progressive neurological disorder that progressively destroys key cognitive abilities ultimately impairing a person’s ability to conduct simple tasks. While FDA-approved medications exist for patients with Alzheimer’s, there is currently no cure to reverse the damage and progression of the disease. This limitation is therefore increasing interest in using non-pharmacological therapies to slow Alzheimer symptom progression. This literature review aims to investigate the effectiveness of non-pharmacological therapies, specifically Dance Movement Therapy, Visual Arts Therapy, and Horticulture Therapy in improving the mental health and quality of life in individuals diagnosed with Alzheimer's. Using databases such as Google Scholar and PubMed, valid studies were included in the review that specifically discussed non-pharmacological interventions focusing specifically on Dance Movement Therapy, Visual Arts Therapy, or Horticulture Therapy on patients diagnosed with Alzheimer's. These interventions have demonstrated both physical and mental benefits, including reduced depressive symptoms and improved balance and mobility, particularly through Dance Movement Therapy. Further research is needed to determine how these therapies can be implemented effectively and which non-pharmacological interventions may be most beneficial for patients with Alzheimer’s. This review offers new insight and understanding on the different benefits of each therapy and how through these non-medicated interventions, patients can maintain a meaningful quality of life.

Introduction

Alzheimer’s disease (AD) is the most common cause of dementia, accounting for approximately 60–80% of dementia cases worldwide [1]. AD is an irreversible neurological disorder characterized by the accumulation of amyloid plaques and tau tangles, which progressively impairs cognitive abilities and individual independence [2]. Because current pharmacological treatments cannot reverse disease progression, interest in non-pharmacological approaches has increased [3]. This review examines the effectiveness of non-pharmacological interventions in improving the well-being of individuals with Alzheimer’s disease by focusing on three interventions: Dance Movement Therapy (DMT), Visual Art Therapy (VAT), and Horticultural Therapy (HT). DMT combines movement and social interaction and may improve physical and cognitive function while reducing depressive symptoms [4] VAT uses creative activities such as painting and sculpting to promote self-expression in individuals with AD [5]. HT uses gardening and exposure to nature to promote relaxation and may improve mood and reduce behavioral symptoms [6]. By examining these approaches, this review evaluates their potential to support the well-being of individuals with Alzheimer’s disease.

Methods

A narrative literature review was conducted to analyze the effectiveness of three non-traditional therapies in improving the quality of life and mental health of individuals diagnosed with AD based on prior research. In order to complete this literature review, Google Scholar and PubMed were utilized to search and select articles that fit the inclusion criteria. Search terms included 1) visual arts therapy for Alzheimer's disease, 2) dance therapy for Alzheimer's disease, 3) therapeutic gardens for Alzheimer's patients, 4) horticulture therapy for patients with Alzheimer's, 5) current therapies for Alzheimer's disease. Inclusion criteria consisted of studies written in English that provided detailed descriptions of Visual Arts Therapy, Dance Movement Therapy, or Horticulture Therapy and reported outcomes specific to AD. The exclusion criteria consisted of studies examining other alternative therapeutic options such as Drama Therapy and Music Therapy, and studies focused on other neurological disorders (e.g., Parkinson's disease, and multiple sclerosis).

Results

A total of 37 potentially relevant papers were identified and screened by title. Following title screening, 15 studies were sought for full-text review. Of the full-text screened papers, 6 met the inclusion criteria. Participants were 50 years of age or older, ranging from mild cognitive impairment to severe cognitive decline. Non-pharmacological therapies showed significant benefits in behavioral symptoms, while improvements in cognitive abilities were more limited and varied across interventions. These approaches were also shown to improve mood, reduce anxiety and feelings of depression, and reinforce connection with their community by reducing feelings of isolation.

Discussion

• Dance Movement Therapy

DMT is a non-verbal intervention that encompasses physical movement to improve balance, social connection, and the quality of life. One study observed a significant decrease of anxiety and depressive symptoms after DMT intervention [7]. Another study found a significant decrease in Neuropsychiatric Inventory (NPI) scores, indicating fewer behavioral symptoms following DMT [8]. An additional study found a significant improvement in Dementia Care and Mapping (DCM) quality of life scores after 12 weeks from the intervention [9]. For physical outcomes, a study conducted functional therapeutic activities and found an increase in flexibility, especially in upper limbs following DMT [10]. Lastly, balance, gait, mobility, and speed were also improved through DMT sessions [8].

• Visual Arts Therapy

Growing evidence suggests that VAT provides psychological and cognitive benefits for individuals with AD [11][5]. A pooled analysis of seven studies found significant improvements in global cognitive function compared with control groups.[12-18]. VAT also improved episodic memory compared with no intervention, although it was less effective than theatre art or singing groups [19][20], and did not significantly improve processing speed or delayed recall. Additionally, pooled studies found that VAT reduced depressive symptoms and anxiety [17][18][20][21][22] [23], supporting its potential to improve behavioral and psychological symptoms in AD. Further research is needed to confirm its effects across other cognitive domains.

Discussion

• Horticulture Therapy

The findings suggest that horticultural therapy (HT) can improve behavioral symptoms, engagement, and quality of life in individuals with AD [24-26]. HT increased activity engagement and significantly reduced agitation and behavioral symptoms compared with control groups [27-31]. a study reported a 12.8% improvement in quality of life, while 82% of participants reported that connecting with nature promoted relaxation, joy, and a more positive outlook [28][32]. These findings suggest that HT may provide individuals with AD opportunities for meaningful activity and connection with nature, potentially reducing the stress associated with the disease. HT may therefore benefit patients by promoting engagement and well-being while potentially reducing the burden associated with behavioral symptoms. Expanding access to therapeutic gardens and structured gardening programs could further support the use of HT in dementia care.

Conclusion

In conclusion, these results highlight the potential of non-pharmacological therapies to improve quality of life and well-being in patients with AD. While DMT, VAT, and HT cannot reverse neurological damage, they may improve behavioral symptoms and promote happiness through movement, creativity, and interaction with nature. Longer interventions, particularly those lasting beyond three months, may provide greater long-term benefits. Future advancements in AI, virtual reality, and adaptive technologies could also allow patients with physical impairments to participate in therapies they may otherwise be unable to access. As the prevalence of AD continues to rise, greater implementation of non-pharmacological therapies may help improve the quality of life of patients with AD.

References

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