Music Therapy on Alzheimer's Disease

Dr LEUNG Yuen Ling, Associate Professor, Technological and Higher Education Institute of Hong Kong

Miss LAW Winky, Graduate of the Bachelor of Science (Hons) in Health Care, Technological and Higher Education Institute of Hong Kong

Dr. CHUN Chiu Shun, Abel Teaching Fellow, Technological and Higher Education Institute of Hong Kong

Introduction

Alzheimer's Disease (AD) is the most common type of dementia. It may impact cognition, social abilities and daily functioning. Apart from pharmacologic treatment, increasing evidence has supported music therapy (MT) to manage AD. The aim of this review is to investigate the effect of music therapy on AD.

Methodology

Electronic databases including Google, Google Scholar, Google Books, Yahoo, PubMed, National Center for Biotechnology Information (NCBI), Oxford University Press (OUP), WHO, Department of Health, Alzheimer's Disease International, Vocational Training Council Library service (EZProxy server) were searched from inception to 4/2017. Adults of age 65 and over, irrelevant of gender and race, were included. Critical appraisal was done and information was analyzed.

Results and Discussion

Six studies met the inclusion criteria with 268 subjects (119 men and 149 women; mean age is 77.9 year-old). The detailed flow of study selection was shown in Figure 1. The total duration of inclusive studies ranged from two weeks to one year.

Cognitive functioning, emotional status and behavioral functioning were explored in this review. Three studies found significant improvement ($p<0.05$) or slightly significant difference in psychological symptoms. Two studies found significant improvement ($p<0.01$) in anxiety. One study found significant improvement ($p<0.05$) and four studies found slightly or no significant difference in cognitive level. Two studies found significant ($p<0.05$) or considerable improvement ($p<0.005$) and one study found no significant difference in daily memory function. One study found significant ($p<0.05$) and another one study found no significant difference in the ability to perform the activity of daily living. None of the study found significant differences in physiological, biological and physical status.

Conclusion

In this review, the positive effect of MT on AD in an older adults was found. Further research should investigate the impact of MT on the cognitive level and activity of daily living of AD patient with a longer MT intervention.

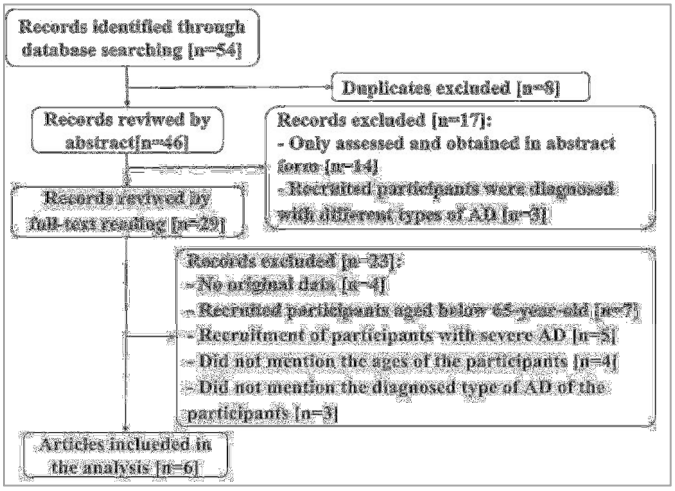


Figure 1: The flow chart of the study selection.

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Table 1. The details of the six studies..

	Guétin et.al (2009)	Irish et.al (2006)	Li et.al (2015)	Lyu et.al (2014)	Satoh et.al (2015)	麦素贞 (2015)
Sample Size	30	20	41	93	20	64
Medical Background and Age of Subjects	Mild to moderate AD; 74 - 95 (*M*= 82.4)	Mild AD; 68 - 83 (*M*=76.4)	Mild AD; 68 - 86 (*M* =78.8)	Mild AD; 65 - 78 (*M*= 69.7)	Mild to moderate AD; 68 - 89 (*M*= 77.6)	Moderate AD; 71 - 88 (*M*= 82.5)
Intervention duration & Frequency	4 months; 20 minutes per week	2 weeks; 45 minutes per week	6 months; 1 hour per day	3 months; 30 minutes per day	6 months; 1 hour per week	1 year; 1 hour per day
Type of MT	Individual receptive	Individual receptive	Individual receptive	Group active	Group receptive	Group receptive
Significant Results	Significant improvement in depression, and anxiety ($p<0.01$)	Significant reduction in anxiety ($p<0.001$)	Significant improvement in the abstraction domain ($p<0.05$)	Significant improvement in immediate recall, verbal language fluency, delayed recall , and psychological symptoms (by NPI) ($p<0.05$)	Significant improvement in psychomotor speed, psychological symptoms) (by NPI), and sleeping time ($p<0.05$)	Significant improvement in cognitive level (by MMSE) and the ability to perform ADL ($p<0.05$)

Abbreviations: Alzheimer's Disease (AD) , music therapy (MT) mean (*M*), Mini-mental State Examination (MMSE), neuropsychiatric inventory (NPI)

Photograph



Biography (150 word limit)

LEUNG Yuen Ling is a graduate of the Bachelor of Science (Honours) in Health Care of the Technological and Higher Education Institute of Hong Kong. LEUNG Yuen Ling research interests including complementary alternative therapies, disease management and child health.

Notes/Comments: