

Miscellaneous**Music Therapy in Dementia**Sombat Muengtaweepongsa¹, Arthita Choolam²

Dementia is a common disease in the elderly. The etiology is the brain cells involved in cognitive function degrade before other brain cells, which causes many kinds of dementia disease subtypes. However, the most common of about 80 percent of dementia is Alzheimer's disease and dementia resulting from cerebrovascular disease. Somehow, both causes may concurrently occur in the same patient, the so-called mixed dementia subtype. The main symptoms of dementia patients include decreased short-term memory, behavior change resulting from cognitive disorders, making them unable to carry out daily living. Many people also experience symptoms of depression. The essential treatment of patients with dementia consists of several parts. The use of drugs to increase cognitive levels is effective only early in the course of the disease. However, the pharmacological treatment only will not be able to stop the disease from progressing. Non-pharmacological therapy with behavioral and environmental modifications is essential to help alleviate symptoms, slow down the progression of the disease, and help promote the quality of life of the patients.^{1,2}

Music therapy is a goal-oriented and purpose-driven activity in which a therapist works with an individual or a group by using musical expressions to stimulate the brain and create happiness during treatment.³ Figure 1 shows the music therapy group activity. Music therapy is still considered a recognized health profession in many countries. They use music to enhance and promote healing in many ways, increase the physical, emotional, cognitive level, and promote social interaction of each individual.⁴ After assessing the basics and needs of each treatment recipient, a qualified music therapist will provide the specified treatment that includes the creation of singing, movement, and/or listening to music through musical involvement. Music therapy research supports its effectiveness in total recovery and facilitation of movement, increasing motivation for people to take part in treatment, providing emotional support for the recipient and their families. It is also a channel for expressing the emotions and feelings of the treatment recipient.⁵

Music therapy has been applied in conjunction with other modern therapies to promote and support the lack of standard therapy. It is used in combination with the standard treatment for depressed patients to help motivate, maintain, and enhance treatment.^{6,7} Music therapy enhances development in premature infants still treated in the ICU.⁸ Surgeons are using music therapy to relieve pain and anxiety in patients with burn injuries.⁹ Neurologists suggest using music therapy to promote language skills training in patients with Parkinson's disease or other brain disease patients with communication disabilities.^{10,11}

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Figure 1 Music therapy group activity from Facebook of Music Therapy Thailand (download from <https://www.facebook.com/musictherapythailand>).

Treatment of dementia with music therapy is combined with other therapies to improve cognitive levels, relieve long-term depression, and improve patients' quality of life. Music therapy is a safe treatment that does not cause any complications.¹² However, music therapy for dementia still requires intensive studies to be used as evidence for standardized therapy because there are still questions about treatment that need to get answered. At least 12 studies on using music therapy as a conjunctive treatment with other standard methods are ongoing in patients with dementia,^{13, 14} as shown in Table 1. At the same time, we are waiting for the study results to be used as a treatment. Music therapy can be safely used in conjunction with other treatments for dementia, especially in the case standard treatment satisfactory results have not been achieved. When there are more studies and research, music therapy is likely to become a more popular and well-established treatment. It should turn to be a recommended option with other standard treatments in patients with dementia.

Table 1 Ongoing clinical trials of music therapy in dementia

Title	Conditions	Interventions	Locations
Beyond Listening: A Music-based Intervention	<ul style="list-style-type: none"> • Alzheimer's Disease (Incl Subtypes) • Depressive Symptoms 	<ul style="list-style-type: none"> • Behavioral: Music 	<ul style="list-style-type: none"> • Menorah Center for Nursing and Rehabilitation, Brooklyn, New York, United States
Music Therapy Experiences in Patients With Mild Cognitive Impairment (MCI) and Alzheimer's Disease (AD)	<ul style="list-style-type: none"> • Alzheimer's Disease • Mild Cognitive Impairment 	<ul style="list-style-type: none"> • Behavioral: Home-based MT through Supervised, Supported Singing (H3S) • Behavioral: Individualized Music Therapy (IMT) • Other: Attention Control (AtCon) 	<ul style="list-style-type: none"> • Louis Armstrong Center for Music and Medicine, Mount Sinai Beth Israel, New York, New York, United States • Alzheimer's Disease Research Center, Icahn School of Medicine at Mount Sinai, New York, United States
Sing for Your Saunter - Dementia Supplement	<ul style="list-style-type: none"> • Parkinson Disease • Parkinson Disease Dementia 	<ul style="list-style-type: none"> • Behavioral: Mentally Singing • Behavioral: Listening to music • Behavioral: Singing 	<ul style="list-style-type: none"> • Washington University School of Medicine Program in Physical Therapy, Saint Louis, Missouri, United States
ROMA (Reminiscence, Reality Orientation, Music and Art) Therapy, Cognition, Depression and Behavioral Problems in the Population With Dementia	<ul style="list-style-type: none"> • Dementia 	<ul style="list-style-type: none"> • Behavioral: ROMA therapy (reminiscence therapy, orientation, music, and art) 	<ul style="list-style-type: none"> • Yonghe Zhongxing Public Seniors Center, New Taipei City, Taiwan
Automate Music Therapy for the Management of Behavioral Disorders in Nursing Homes	<ul style="list-style-type: none"> • Alzheimer Disease • Major Neurocognitive Disorder 	<ul style="list-style-type: none"> • Procedure: Music Therapy 	<ul style="list-style-type: none"> • CHU de Nice, Nice, France
The Effect of Shared Listening to Personalized Music on Symptoms of Behavioral Disorders in the Elderly With Advanced Dementia	<ul style="list-style-type: none"> • Dementia 	<ul style="list-style-type: none"> • Combination Product: 2gether app used by trained personal 	

Table 1 Ongoing clinical trials of music therapy in dementia (Cont.)

Title	Conditions	Interventions	Locations
Individualized Music Playlist Based on ISO-Principle for De-escalating Agitation of People Living With Dementia	<ul style="list-style-type: none"> • Dementia 	<ul style="list-style-type: none"> • Behavioral: Music listening • Behavioral: Audio Book Listening 	<ul style="list-style-type: none"> • School of Nursing, The Hong Kong Polytechnic University, Hong Kong, Hong Kong
Study of the Effects of Adapted Tango and Multidimensional Intervention in pREvention of Dementia in aging (STRENGTH)	<ul style="list-style-type: none"> • Mild Cognitive Impairment 	<ul style="list-style-type: none"> • Behavioral: Adapted Tango Dancing • Behavioral: Control 	<ul style="list-style-type: none"> • Cinzia Giuli, Fermo, Italy
Development and Application of Portable Multisensory Stimulation Device	<ul style="list-style-type: none"> • Cognitive Impairment 	<ul style="list-style-type: none"> • Device: vibroacoustic device 	<ul style="list-style-type: none"> • Kwan-Hwa Lin, Hualien City, Taiwan
Home-based Family Caregiver-delivered Music and Reading Interventions for People With Dementia	<ul style="list-style-type: none"> • Dementia • Dementia, Vascular • Dementia With Lewy Bodies • Dementia, Mixed • Dementia Alzheimers • Behavioural and Psychiatric Symptoms of Dementia • Depression • Quality of Life 	<ul style="list-style-type: none"> • Other: Music Intervention • Other: Reading Intervention 	<ul style="list-style-type: none"> • The University of Melbourne, Melbourne, Australia • University of Applied Sciences Würzburg-Schweinfurt, Würzburg, Germany • Norwegian Academy of Music, Oslo, Norway • University of Physical Education in Krakow, Kraków, Poland • Anglia Ruskin University, Cambridge, Cambridgeshire, United Kingdom
Music Interventions for Dementia and Depression in Elderly Care	<ul style="list-style-type: none"> • Dementia • Depression 	<ul style="list-style-type: none"> • Behavioral: Group Music Therapy • Behavioral: Recreational Choir Singing • Other: Standard care 	<ul style="list-style-type: none"> • The University of Melbourne, Melbourne, Victoria, Australia

Table 1 Ongoing clinical trials of music therapy in dementia (Cont.)

Title	Conditions	Interventions	Locations
Alzheimer and Music Therapy: Effects of Music Lessons on Brain Plasticity, Mood, and Quality of Life in Alzheimer Patients	<ul style="list-style-type: none"> • Alzheimer Disease • Mild Cognitive Impairment • MCI With Increased Risk for Alzheimer Disease 	<ul style="list-style-type: none"> • Behavioral: Music lessons • Behavioral: Training intervention 	<ul style="list-style-type: none"> • Bergen Municipality, Bergen, Hordaland, Norway

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