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Beneficial approach of music therapy for the patients with dementia

Keywords: MT, music therapy; RS, reminiscence stimulus; IMJ, integrative medicine japan, hinohara-ism, new elderly association, dementia

Abbreviations: IM, integrative medicine; CAM, complementary and alternative medicine; MT, music therapy; IMJ, medicine japan

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Commentary

In recent years, Integrative Medicine (IM) and Complementary and Alternative Medicine (CAM) have been more known to the people, and they have been evaluated to be clinically effective in various situation. Among IM and CAM, music therapy (MT) has been one of the accessible and preferable practices for everyone. The author Bando has been physician, pianist and music therapist and continued management of Shikoku division of Integrative Medicine Japan (IMJ).[1] All authors have continued MT for various subjects, and we introduce current topics and important tips in this article.

Dementia has been one of the clinical syndrome characterized by its progressive decline in cognitive functions. Alzheimer's type is the most common type of the dementia, which is followed by vascular type, Lewy body and frontotemporal dementia.[2] Dementia means a collective name for progressive degenerative brain syndromes. It may bring impairment of thinking, memory, behavior and emotion.[2] Typical symptoms include loss of memory, personality / mood changes, difficulty in performing previously routine tasks, and difficulty in finding the right words or understanding what people are saying.

The prevalence of dementia across the world has been increasing. The estimated number would be about 50 million in 2015, 75million by 2030 and 132million by 2050.[2] There have been various research for the cause and the treatment for dementia. Pharmacological interventions have been available so far, but have limited ability to treat several syndromes' features. Recent recommendation shows nonpharmacological treatment approaches with effective relevant outcomes such as music therapy. In order to prevent cognitive deterioration, some care should be given to stimulate abilities, lessen problematic behaviors and improve QOL. The therapeutic application of music therapy may contribute to these problems. The aim of this commentary would be to present current status among dementia and intervention of music therapy.

Music therapy has been defined by World Federation of Music Therapy (WFMT). It is the professional use of music and its elements as an intervention in medical, educational, and everyday environments with individuals, groups, families, or communities who seek to optimize their quality of life and improve their physical, social, communicative, emotional, intellectual, and spiritual health and wellbeing.[3] Concerning music therapy, research, practice, education and clinical training have been based on professional standards according to cultural, social, and political contexts.

Furthermore, American Music Therapy Association (AMTA) defines music therapy. Music Therapy is the clinical and evidence-based use of music interventions to accomplish individualized goals within a therapeutic relationship by a credentialed professional who has completed an approved music therapy program.[4] It also describes assessment of the client, interventions, benefits and research, and explains that music therapy is used "within a therapeutic relationship to address physical, emotional, cognitive, and social needs of individuals."

Regarding the music therapy, there are lots of types from theoretical and fundamental points of view. In the light of actual session of music therapy, there are two types of music-based therapeutic interventions, such as passive and active music therapy. Those may be often combined, and presented in a variety of opportunities.[5] Music as therapy can include narrow definition of music therapy, which is given by a formally credentialed music as a therapeutic application.[6]

Generally speaking, singing in a group can improve social skills and bring a greater awareness of others. Patients with dementia can encourage reminiscence and discussions of the past experience, associated with decreasing fear and anxiety. Subjects with compromised breathing can increase oxygen saturation by singing as a treatment. For patients with difficulty speaking after cerebrovascular accident (CVA), music may play an important role of stimulating language area by promoting the ability of singing.[7] Consequently, singing can improve a series of physical and psychosocial parameters.[8] Playing some instruments may improve and train large and fine motor co-ordination in patients with motor impairments or neurological trauma by CVA, head injury or some diseased process.[3,9]

Although cognitive function may decline during the progression of the disease, there is a possibility that receptivity to the music may remain until late period.[10] This phenomenon may come from maintained function of musical memory area in the brain of Alzheimer's disease.[11] There is probably existing fundamental function of music in the brain, which precedes lexical mechanism of language development.

By the existence of music, we can recall various life experiences associated with emotions at that time. Our important events are accompanied by music in the deep level of the brain. The musical

memory has been stored for longer period than others without accompanied by music.[10] Even if patient with dementia cannot recognize words, one can feel well-being and safety for familiar music. Consequently, musical rhythm may enable patients with dementia to recognize and organize time and space.

From the study of music-based interventions for non-pharmacological treatments, the positive beneficial effect of music has been observed.[12] Providing at least five music-based therapeutic intervention performance may decrease depressive status and improve general behavioral problems.[12] Furthermore, it can increase quality of life and emotional well-being and decrease anxiety mood. However, it showed little or no effects on cognition or unstable symptom of agitation and aggression.[12] Further study concerning social behavior, long term effect and others would be expected.

For the patients with dementia, the practice of reminiscence stimulus would be effective as one of the psychosocial intervention. It includes various concepts, and is usually described as the experiences and discussion of past activities and events. It can make various prompt memory emerging from the past such as music, pictures and familiar objects.[13] The reminiscence stimulus has been introduced into clinical medicine, but its research has been in immature situation. Actually, it has shown positive efficacy on many patients with depressed mood and with long term care environments.[14,15] Furthermore, it has been effective for preventing depressive status and improving quality of life in elderly subjects and patients with depression.[16,17] From the cognitive point of view, patients with dementia tend to emphasize the reminiscence on long term old memories. Then, they usually recall various experiences more often than those of recent events and memories.[18]

There were some reports that the reminiscence can bring benefit on depressed mood and cognitive function. However, there were some weak points for the quality or intervention protocols.[19] In addition, the reminiscence was proved to be consistently associated with improved better mood, but there were some variation of intervention frequency and length among several investigations.[19] Another study showed that reminiscence showed improved QOL and cognitive function.[20] As for the research for individual reminiscence, structured life review for patients with dementia showed positive psychosocial outcomes.[21] In contrast, less structured simple reminiscence interventions did not show efficacy.[22] RT in group treatment showed a significant beneficial results for cognition and communication abilities.

There were progress of the quality and volume for the reminiscence research on the completion of large, multicenter randomized controlled trials (RCTs).[23,24] Then, one of the new review was carried out by the Cochrane Collaboration Cognitive Impairment and Dementia Group.[13] The purpose of this project would be to evaluate the efficacy of cognitive function, depressed mood, communication and QOL for RT research for patients with dementia.[13]

One of the recent reviews for Reminiscence Therapy would be the report by Cochrane Dementia and Cognitive Improvement Group (ALOIS).[18] ALOIS stands for Alzheimer's and cognitive improvement studies. This review was conducted from 185 records of 22 reports (n=1972). It included 4 large multicenter high-quality studies and several smaller studies. Their outcomes of interest were cognition, depression and communication at before and after the intervention.[18] The reminiscence stimulus showed the possibility of improving psychosocial outcomes for patients with dementia. Probably, its efficacy may be rather small and inconsistent with varying intervention situation. There were improved mood and cognition in the light of individual approaches. The effect on QOL seemed to be most beneficial in the nursing care situation. There are various diversity in reminiscence approaches, which can bring various developing possibility concerning evaluation, method, standardized approaches and so on in the future.

Conclusion

In summary, this article described current topics for MT associated with reminiscence stimulus for patients with dementia. This article would be expected to become a useful reference for actual session in the future activities of IM and CAM.

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Conflicts of interest

Author declares there are no conflates of interest.

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