

# Understanding the Effect of Using Music Therapy Programme without Music Therapists for Seniors with Early Stage of Dementia in Thailand: A Preliminary Study

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## Abstract

This article is written by the authors after studying the National Bureau of Statistics' data about the number of the elderly in Thailand. It indicated the fast growing number of the Thai seniors as seen from their proportion to the entire population. In 2014, the number of the old people increased to 10 million, representing 14.9%. Of them, 5-8% suffered dementia, and more number when age climbed up. Treatment of dementia is available in two forms. The first is by medication for relief but no cure and at high cost when compared with the population's income base. The second requires no medicine such as by brain management and the correct and closely care. However, the authors found that music therapy, a non-drug treatment, was a more interesting alternative thanks to its positive results shown by research abroad. As the social context of Thailand where the poor patients live in remote areas and thus are distant from music therapists hence encouraged the authors to present the ready-to-use musical therapeutic package as a means to slow down dementia. The package combines meditation, music and bodily movements into a series of activities for 10 weeks to complete

**Keywords:** Dementia, Music Therapy, Cognitive Function, Memory, Rehabilitation, Aging society

## Introduction

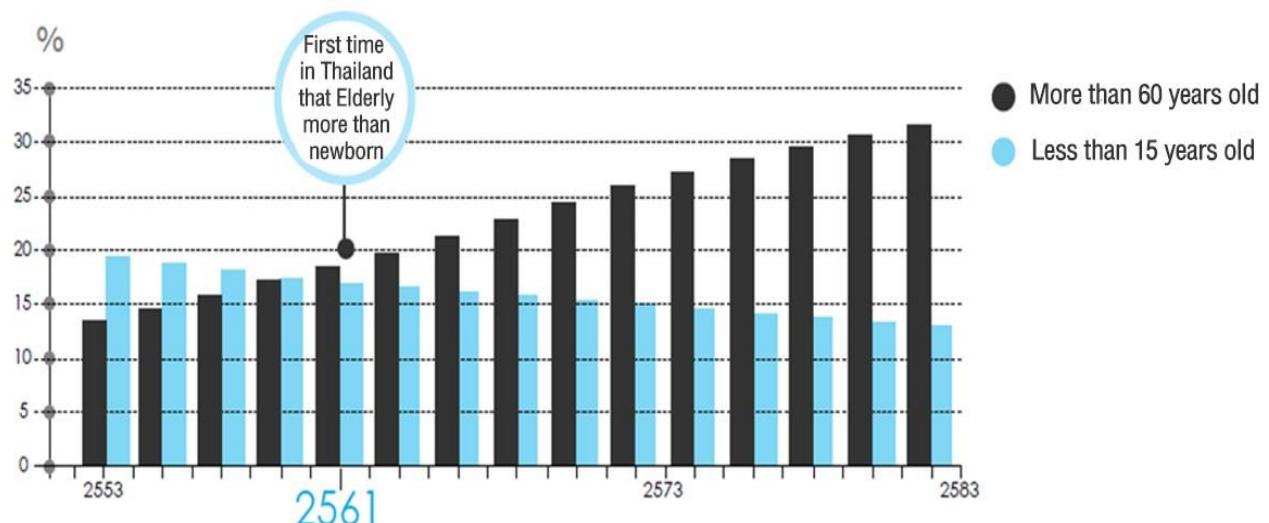
According to the National Statistical Office, the number of elderly people in Thailand has been increasing rapidly and has constituted more than 10 percent of the population since 2007. In that year the elderly, over 60 years old, accounted for more than 7 million people or 10.7 percent of the population, and by 2014 their numbers had surged to 10 million people or 14.9 percent, suggesting Thailand has fully become an aging society.

**Table 1** Number of Thai elderly, 2010-2014

Year	Male Seniors	Female Seniors	Total	Percent of Population
1994	1,801,780	2,210,074	4,011,854	6.8
2002	2,729,095	3,239,935	5,969,030	9.4
2007	3,130,736	3,890,223	7,020,959	10.7
2011	3,641,589	4,624,715	8,266,304	12.2
2014	4,514,815	5,499,890	10,014,705	14.9

Source: National Statistical Office (2014)

The data of the Office of the National Economic and Social Development Board also indicated that the proportion of elderly people was likely to increase steadily. It has been estimated that by 2030, the number may reach 25 percent of the population and 32 percent in 2040.



**Figure 1** Estimated Population of Thailand, 2553-2583 (2010-2040)

Source: Office of the National Economic and Social Development Board

## The National Problem

Changes in the demographic structure, especially the increasing elderly population, as mentioned above, have been an important issue for which Thailand is seeking solutions because these changes can affect the management of the public and private sectors.

This is particularly the case with regard to public health and medical care, owing to seniors' increasing health care needs as they age.

Dementia is a disease frequently found in the elderly. Up to 5 to 8 percent of those age 65 or older suffer this sickness, and the rate is higher as age increases. For those 90 years old or more, the rate is as high as 50 percent. Dementia is a type of brain disorder. Brain cells gradually die with age, but in the case of dementia patients, brain cells die fast and the brain shrinks, causing severely deteriorated brain function. Patients are not merely forgetful, but there are also problems in understanding language, learning, computing, and judgment. Their personality and behavior may also change.

In addition to causing patients to lose their memory and perception of identity, dementia can affect their relationships with others to the extent that they may fail to do normal daily activities. Care-giving relatives or children ache both physically and mentally because they are dedicated to taking care of the patient at all times. That can cause economic loss due to lost working hours for a person caring for a patient. In addition, the cost of hiring a caregiver is about 8,000 baht per month for a patient in the early to moderate sickness stage, and more if more than one caregiver is needed. The cost of medication is about 4,100-5,300 baht per month. Medication for certain types of dementia such as Alzheimer's is not on the governmental master medicine list and thus cannot be disbursed under governmental medical care. A seriously sick patient may encounter expenses of more than Bt40,000 per month (Meananan, 2009).

According to a study of dementia in the Asia-Pacific region in 2006, there were 229,000 dementia patients in Thailand. The number is expected to inch up to 450,000 patients over the next 20 years and to more than 1 million by 2050. Thailand will have to pay several billion baht per annum for the medical care of dementia patients, not counting the loss of the working-age people who need to take care of such patients (Chansirikarn, 2008).

There are two types of treatment for dementia: drug therapy and non-drug therapy. Non-drug therapy includes brain management and close patient care. Neither form is a cure. Rather, they help sustain and extend the patient's quality of life and lessen the effects of the disease

(Heamrathcharoj, 2013). The authors of this research consider that non-prescription treatment is an interesting alternative to current dementia therapies. The therapy can be done in several ways, each with a different procedure as appropriate. Music therapy (English) is one of them. It has been found that the use of music in conjunction with other treatments can reduce pain and help restore the memory of dementia patients. Several studies have pinpointed that allowing patients to listen to the popular music of their youth leads them to use their imaginations to think about their pasts.

## Examples of Music Therapy Research

Below are summaries of the studies on the use of music therapy to rehabilitate and treat dementia. They can be used as a guideline that can be applied in Thai society.

Vasionytė and Madison (2013) conducted a total of 19 research studies with 478 dementia patients, including a meta-analysis of the effects of music therapy in dementia patients. The studies showed that music therapy improved quality of life, behavior, cognitive function, and affective domains. The studies proposed therapeutic music forms that might positively affect patients, saying that listening to classical or relaxing music, recorded music, and music chosen by the therapist in a group format outperformed listening to pop music, singing or live music, or the music selected by the patient. However, there was not enough evidence to conclude which type of music therapy works best.

Simmons-Stern, Budson, and Ally (2010) conducted a study on memory creation in Alzheimer patients comparing those who listened to unrecognized lyrics in speech with those who listened to similar lyrics but in tune. Their findings showed better memory in the patients who listened to melodic lyrics. Researchers suggested the abnormalities of the cortex and hippocampus hurt the episodic memory whereas the musical process used more pieces of the complex brain networks, which included the basal ganglia, the nucleus accumbens, the ventral tegmental area, the hypothalamus, the cerebellum, the medial prefrontal cortex, and the orbitofrontal cortex, which are less affected in Alzheimer patients.

Gallego and Garcia (2017) studied the effects of music therapy on Alzheimer patients by creating two sessions of music therapy per week for six consecutive weeks. The therapy was a combination of listening to music, dancing, clapping hands, moving the arms and legs along with the melody, and guessing the names of songs. The results showed that those activities benefited the memory, perception, depression, and anxiety of patients in the early and middle stages of Alzheimer's. The activities also reduced oblivion, hallucination, excitement, and verbal disorders in patients in the middle stage of Alzheimer's.

Särkämö et al. (2014) studied music therapy in 89 dementia patients who were divided into three groups: the singing group, the music listening group, and the control group. All three participated in music therapy activities for 10 weeks. The results showed that there were developments of emotion, perception, remote episodic memory, attention, and overall cognitive functions. The singing group also developed their short-term memory and working memory while the music listening group had better quality of life compared to the control group.

Cheung, Lai, Wong, & Leung (2016) studied the effects of using music therapy in combination with movement on the cognitive function of patients with mid-stage dementia. The patients were divided into three groups: music therapy combined with movement, music listening, and the control group where the patients adopted social-chatting therapy. Their thinking, depression, and excitement were measured at the start of the study period and at six and 12 weeks after the start of the project. The study found that there was better development of memory and less depression in the music therapy with movement group.

## The Wide Concept of Music with Movement as Treatment for Early-Stage Dementia

My current study has discovered that Thailand has never used music therapy that has matched the vivid Thai society and culture. In addition, the use of music therapy in Thailand has focused on emotional treatment, such as for depressed patients. Music therapy for dementia patients is not yet widespread in Thailand because of several factors: the costs, the limitation of music therapists, and the stress from the care given to the dementia patient in the family. The authors thus propose music therapy as a new treatment alternative in Thailand thanks to its few side effects and the positive results of various studies on the issue, despite the need for additional research. However, the cost of treatment is high and it is hard to access due to the limited number of music therapists in Thailand.

Based on the studies summarized above, the authors propose the “Music and Movement-based Intervention for Elderly Patients with Mild-state Dementia without a Music Therapist” as a concept for experimental research. The authors offer the design of a music therapy activity set that can slow down the memory deterioration of patients with early- and mid-stage dementia.

The music therapy activity set is a 10-week program. Its clear thematic topics emphasize the benefits of rehabilitation and improve cognitive functioning. The set comprises three activities, namely, (1) meditating, (2) listening to songs that are familiar to or popular with the seniors, and (3) singing with easy movements that are related to daily living basics. Details are shown below.

1. The meditation aims to increase attention to the actions that patients need to be able to do.
2. The popular song set is to be designed. The songs should be hits from various important festivals and from mainstream music from 1939 to the present, such as Suntaraporn Orchestra and Royal Music Compositions by His Majesty the King Rama IX. They will be arranged in order as appropriate for the topic or theme each week. For instance, week 1 will focus on relaxation and fun. Week 2 will be familiar songs from childhood. The purpose of the design is to help stimulate the cognitive portion of the brain so as to increase memory function.
3. The movement set is designed to match the lyrics to actions required for daily living. Determination of the specific movements shall be made with medical doctors in order to best suit the patients. The objective is to improve the patients' daily living ability.
4. A ready-to-use video shall be made for the treatment of patients in remote areas that are inaccessible to therapists.

## Conclusion

Changes in demographic structure, especially the transformation into an elderly society in Thailand, are important issues facing Thailand for which it must seek managerial solutions. The change to an elderly society will affect the management of the state and private sectors and even families. It will also heavily impact public health and medical care as older people experience deteriorating health due to aging. The cost of care will surge as a result.

Dementia is a disease found primarily in seniors, aged 65 and over, and increases in prevalence with age. Dementia is a disorder of the brain in which cells die much faster than normal, causing patients to suffer various symptoms due to severely degraded brain function. It affects their lives and families because of patients' inability to perform daily routine activities. The care-giving relatives or children suffer both physically and mentally as well because they are dedicated to taking care of the patients at all times. That causes economic loss because of the exploitation of a working-age person to care for the patient. Besides the high cost of care, there is no cure.

Music therapy is an interesting healing option based on the successful results of various

relevant studies. However, music therapists in Thailand are few in number and are inaccessible for most deprived patients. Therefore, this study offers a complete set of music therapy activities for patients without music therapists so as to cope with Thailand's approaching elderly society in the near future.

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