

Chapter 33

Music Therapy for Dementia Patients: Tuned for Culture Difference

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ABSTRACT

As the average life expectancy continues to rise, dementia has become a critical health care issue. At this situation, the effective management of dementia requires the development of rehabilitation methods for symptom relief in patients. This chapter hypothesizes that one such method, music therapy, could be improved by taking into account the cultural background of the patient, because musical preference is often dependent upon cultural context. This chapter investigates the effects of Japanese music on the alleviation of dementia symptoms in Japanese patients as compared to the effects of classical music.

The authors collected 87 volunteers including 79 dementia patients, 2 people under 65 years of age, 10 early-stage senior (65-74), and 66 late-stage seniors (>75). The volunteers listened to the following musical selections: two simple melodies of Japanese songs (major/minor with the same tonality) from Edokomoriuta (famous nursery songs in Japan), two songs from Kagomekagome (famous play songs in Japan), Touryanse (children's song widely played in Japan), and two original songs (major/minor) with the same tonality. We prepared two variations of classical musical scales: one in the scale of C major and the other in the scale of C minor. We observed their responses in two ways: the physiological response as determined by Near-Infrared Spectroscopy (NIRS), which measures changes in blood flow, and the subjective response as determined by questionnaires.

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Our results show that dementia patients tend to judge Japanese music as being played in a major key, while healthy subjects judged these songs as being in a minor key. Our results reveal characteristic responses of dementia patients to the Japanese music and provide evidence for the improvement of using music therapy for dementia patients by accounting for their Japanese culture.

INTRODUCTION

A. Research Theme

In this chapter, we discuss two research themes. The first theme is feasibility of music therapy for the precise and appropriate brain rehabilitation of dementia patients. The second theme is measurement of the objective and quantitative effectiveness of music therapy.

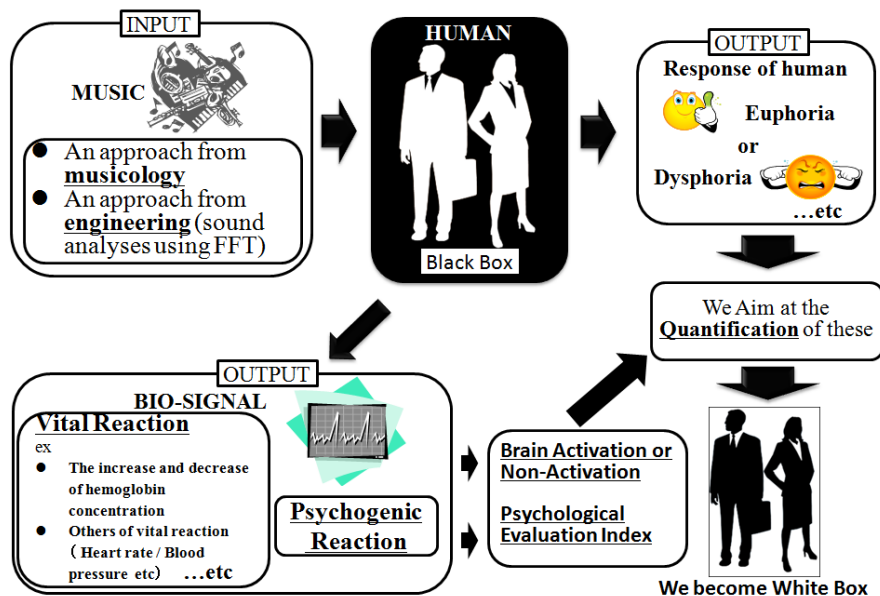
These studies are elementary steps toward the goal of our research is to quantify the response of the person when human hear music (see Figure 1), we use music as the input data and human responses as the output data.

B. Background

In recent years, the elderly portion of the population has increased significantly, leading to a related increase in the number of patients with dementia (Japanese Ministry of Health, Labour and Welfare, 2008; United Nations, 2004). This is the reason why prevention, effective rehabilitation and treatment/therapy for dementia are most required in super-aging society. While each of these aspects is equally important, this work focuses on the rehabilitation and treatment/therapy aspects of dementia.

One current method of rehabilitation and treatment/therapy for dementia is music therapy, which

Figure 1. Research aims: The major goal of this work is to objectively quantify both the musical input and the physiological output in response to music therapy



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