

## Music therapy for elderly sleeping quality

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### Abstract

Elderly people have sleeping disorder problems which can be occurred frequently. This is a significant public health issue because sleeping disorder leads to cause depression, diabetes, cardiovascular, Alzheimer's disease. Currently, music therapy might be a good choice instead of western medicines for the treatment of a sleeping disorder. This short communication describes the background of sleeping disorder, music therapy, and its research progress as well as the future development. A simple systematic search of publications in PubMed, Embase, Cochrane Library, and google search without language restriction is performed. Because of the little finding on the music therapy for sleep disorders in present literature, therefore, there is a short communication written by some literature reviews before starting a novel study of sleeping disorders for elderly people.

### Introduction

Sleeping disorder is quite common in the elderly which associated with functional deficits in everyday life, consisting of an increased sense of tiredness and mood disorders. There are approximately 50% of people aged 55 years and older have trouble sleeping. It is a significant public health problem in an aging society because of the lower quality of life, increased risk of depression, diabetes, cardiovascular, Alzheimer's disease, etc.<sup>1</sup> The pharmacological treatment for sleep disturbance of the elderly includes benzodiazepines, Z-Drugs, melatonin, doxepin, amitriptyline, suvorexant, valerian, and que-

tiapine. However, these are not good choices for long-term usage within a few side effects such as somnolence, cognitive impairment, and increased risk of falls and fractures in older people.<sup>2</sup>

### Music therapy

This is accomplished to achieve individual goals with the usage of music during clinical treatment. It is an evidence-based therapy well-established in the health community which includes listening, singing, playing instruments, or composing music. Music therapy doesn't require any skills and participants for improving personal psychological, emotional, physical, spiritual, and cognitive problems as well as some diseases such as reducing stress, changing mood, and self-expression.<sup>3</sup>

Several types of music therapy consist of analytical music therapy, Benenson music therapy, cognitive behavioral music therapy (CBMT), community music therapy, Nordoff-Robbins music therapy, and vocal psychotherapy.<sup>4</sup> These can either be active or passive processes, where people play a role in creating music or just listening and responding to music. A combined approach that involves the active and passive of people interacting with music.<sup>5</sup>

### Research progress

Growing evidence has shown that music therapy was a non-pharmacological treatment for improving the sleeping quality of an elderly recently year. Chen *et al.* reported music therapy was safe and easy to administer that effective to enhance sleep quality among older adults, particularly those listening to more sedative music for at least a four-week duration, 30 to 45 mins sessions two or three times every week which also improved cognitive and physical functions, mood states, as well as the quality of life.<sup>6</sup>

Verrusio *W et al.* identified that music therapy affected human psychological responses, for example, mood and physical movement leading to better health outcomes. The musical elements such as melody, tone, and harmony are influenced the emotional responses. These elements passed through the auditory cortex of the brain, music processing occurs in the limbic system of the brain to obtain emotion, as a result, it regulated the psychological status.<sup>7</sup>

Meanwhile, Loewy *et al.* indicated music therapy was a potential intervention for a sleep disorder. Music as a role of sleep

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induction. This was a potent stimulator or sedative for the neurological system which utilized activating rhythms and strong beats to infuse an energetic state. It induced the brain's sleep response when the slow repetitive rhythms imbue feelings of safety and familiarity.<sup>8</sup>

### Discussion

Personal abilities are strengthened and transferred to another area in daily life via the musical therapeutic context. This might work on vowel sounds from music singing and get a positive effect on the mental feeling in the brain, especially for the benefit of the elderly promoting sleep quality. It helps the elderlies relax from nervous status and improves sleeping habits. The positive feeling is increased like calmness, euphoria, confidence, empowerment, and emotional intimacy.<sup>9</sup> Besides, there are few studies on obsessive-compulsive disorder (OCD),<sup>10</sup> and Schizophrenia of music therapy.<sup>11</sup> It is also useful in sleep disturbances of elderly with dementia, this field can be explored for further investigation.<sup>12-15</sup>

## Conclusion

All the above information demonstrates that music therapy could improve the elderly sleeping quality. It is a non-pharmacological treatment without side effects. However, the music might trigger strong reactions or evoke memories of pain that cause emotional flooding. Thus, there are some different music therapies for elderly sleep disorders.

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