Cantonese adaptation of Melodic Intonation Therapy (MIT) for dementia patients

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Background:

Receptive and expressive speech problems in dementia (e.g., difficulty in understanding complex concepts, incoherent speech) have been well-documented. Melodic Intonation Therapy (MIT) is a neurologic music therapy technique that was first developed to assist speech recovery in patients with post-stroke aphasia. While this combination of music and language has been reported to be effective for aphasics, the possible effects of an adapted MIT for the dementia population has not yet been investigated.

Methods:

Nine literate, native Cantonese-speaking participants with dementia (mean age = 80 ± 7.09 years, 3 male, mean MMSE = 16.89 ± 3.69) and with reported expressive speech problems by caregivers were recruited from an elderly day care centre of the Hong Kong Alzheimer's Disease Association. Participants completed a 3-week group-based MIT program (30 minutes per session, twice a week) designed to improve the speech functions of dementia patients. Over the whole program, two children songs with melody familiar to elderly but newly rewritten lyrics were taught and practiced. The subtests of spontaneous speech and auditory comprehension in Cantonese Aphasia Battery were conducted pre- and post-intervention to assess the changes in expressive and receptive speech of participants.

Results:

Rates of consent and retention were both 100%, with an attendance rate of 89%. Pre-post analyses using Wilcoxon signed rank test showed significant improvement in the sub aphasia quotient of spontaneous speech after intervention (Z = 2.54, p < .05). Further analyses revealed that this improvement was contributed solely from the fluency score (Z = 2.69, p < .01), but not from information (Z = -0.27, p > .78). Only a trend of improvement was observed for the sub AQ of auditory comprehension (Z = 1.68, p = .093). Qualitative analyses suggested possible improvements in different language domains (e.g., specificity of item description, syntactic complexity of sentence structure).

Conclusion:

This study is the first to evaluate the feasibility and preliminary effects of the Cantonese adaptation of MIT for dementia. Our results demonstrated positive effects in the fluency of spontaneous speech (significant) and auditory comprehension (trending), showing the potentials of this music therapy in enhancing speech performance of dementia patients.