

Smart People (Smart Ageing) Silver Award 智慧市民(智慧樂齡)銀獎

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A Stand-alone Therapeutic Music-with-Movement Programme for Elderly with Cognitive Impairment

This stand-alone music-with-movement programme is designed to deliver the evidence-based therapeutic music-with-movement intervention to older adults with cognitive impairment, for improving their cognition and psychosocial symptoms.

The team has invented the wireless-charging motion-sensing instruments to engage participants in the interactive music-with-movement intervention and track the engagement level and cognitive performance (i.e. reaction time, resultant force, and accuracy in performing the cognitive tasks). The developed system allows flexible online training; remote game management and monitoring of the game actions through the game editor engine; interaction between participants and the system using augmented reality (AR) and motion sensing technologies for enhancing fun; and automatic report generations.

During the COVID-19 pandemic period, older adults with cognitive impairment are the most vulnerable group in the society under the social restriction policy. Music is an excellent therapeutic medium for caring for people with cognitive impairment, who have impaired memory and verbal communication skills. This programme offers an innovative psychosocial intervention that addresses the needs for cognitive stimulation and social interaction and help them maintain their health and well-being.

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Comments from Judging Panel 評審委員會評語

The system provides a convenient and easy ways for engaging elders into music program, bringing quality of life to them. Music and Games for the dementia with the intention to help their emotional behavior and cognitive slow down. It's a user friendly and good solution to assess the responses of the elders when participating the program.



一站式認知障礙症長者的治療性音樂律動程式

一站式程式以認知障礙長者為對象，提供已證實有療效的音樂律動干預，幫助對象改善認知能力和其他心理社交症狀。

由研究團隊開發的無線及可充電動感應樂器，可促進參與者投入互動的音樂律動干預，並能追蹤他們的參與度和認知表現，例如：反應時間、力量和處理認知任務的準確性等。家屬及員工可運用本程式進行靈活的網上培訓。我們更設計了遠端遊戲管理系統-遊戲編輯器，用作監察遊戲動作，及更新活動程式。另外程式更能自動編寫長者參與活動的有關報告。此外，本程式應用擴增實境和動作傳感科技以增加遊戲樂趣，促進參與者與系統互動。

2019冠狀病毒病大流行期間，在各種防疫社交距離的政策限制下，患有認知障礙的長者是社會中最脆弱的群體。音樂用於照顧有記憶及言語能力衰退的認知障礙症患者來說，就最合適不過。程式提供具創意的社會心理干預，回應這群體對認知刺激和社交互動的需求，助他們維持身心健康。

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