Effectiveness of Compensatory Cognitive Training (CCT) through Modified CogSMART on Neurocognitive and Functional Enhancement of Patients with Mental Illness (MI)

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Introduction
A strategy-based compensatory cognitive remediation training program called the Cognitive Symptom Management and Rehabilitation Therapy (CogSMART) was recently developed by Elizabeth Twamley to improve the cognitive function of individuals. A modified CogSMART (MCogSMART) program focused on prospective memory, attention and vigilance, learning and memory was adopted and translated with Chinese version by OTD of KH. The program was piloted to mentally-ill patients with cognitive problems.

Objectives
To evaluate if the MCogSMART program enhances the neurocognitive and functional performance of patients with MI.

Methodology
It was a pilot experiential study in which psychiatric outpatients of OTD with cognitive problems and declined occupational functioning were recruited. Their cognitive performance was within 1-2 standard deviation below the mean of Montreal Cognitive Assessment Hong Kong Version. MCogSMART covered the first 8 sessions of original CogSMART and included training on prospective memory, attention and vigilance, learning and memory. Practical tips on strategy use into daily living were prescribed after relevant training sessions. Booster session to enhance strategy use in the real world was arranged at one month after completion of 8 sessions of MCogSMART. Cognitive measure on verbal learning and memory (VLM) was using Hopkins Verbal Learning Test TM-Revised (HVLT-R) and Story Subtest of Rivermead Behavioral Memory Test (RBMT-S) whereas cognitive measure on processing speed (PS) was using Trail Making Test part A (TMT-A) and Brief Assessment of Cognition in Schizophrenia: Symbol Coding (BACS). Everyday Memory Questionnaire – 35 Questions Version (EMQ) was used as functional measure. They were administered at baseline and post-intervention immediately after booster session.

Result
A total of 12 patients were recruited from April to December 2017. 5 patients were
diagnosed with schizophrenia and 7 patients had mood problems. There was significant improvement of patients' verbal learning & memory area as measured by HVLT-R & RBMT-S and everyday memory performance as measured by EMQ. No significant difference was found in cognitive measure on processing speed before and after intervention. Despite no significant progress was found in PS, CCT through MCogSMART was shown to improve VLM and functional performance of patients with MI. They could benefit from learning compensatory strategy for such progress. The cognitive strategies learnt could also be generalized in patients’ daily situations.