Service Evaluation of Group Physiotherapy Intervention for Psychogeriatric Patients with Dementia in Old Aged Homes

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Introduction
Since 2011, psychogeriatric outreach service of NTEC had launched a new physiotherapy program called Multimodal Stimulation and Movement (MSM) program for the patients with dementia living in old aged homes (OAHs). The MSM program incorporated exercise with multimodal stimulations including music, dance, reminiscence therapy, reality orientation and acupuncture points to improve physical well-being, mood, the abilities in activities in daily living (ADL) and to reduce behavioural and psychological symptoms of dementia (BPSD).

Objectives
To evaluate the effectiveness of the MSM program held in OAHs from 2011 to 2017 for patients with dementia.

Methodology
Retrospective data analysis was used to compare the outcome measures obtained from pre and post program assessment. Subjects included the psychogeriatric patients living in private OAHs diagnosed with dementia who completed MSM program during 2011 to 2017. The MSM program provided one-hour group intervention twice a week with a total of 24 sessions for each patient. Each session consisted of reality-orientation, warm-up exercise, gross motor game, dance and specific ADL training or balance training. Outcome measures were categorized into cognitive function, physical function, mood and BPSD. Questionnaire was delivered to OAH staff after completion of MSM program for feedback.

Result
Records of a total of 168 patients with dementia from 2011 to 2017 were reviewed.
They aged between 65 and 96, who lived in OAHs in North district, Tai Po and Shatin. Their mobility level assessed by the Modified Functional Ambulation Classification (MFAC) ranged from 1 to 6. Statistically significant improvement was found in cognitive function in terms of Mini-Mental State Examination (MMSE) \( p=0.026 \) and Montreal Cognitive Assessment Hong Kong version (HK-MoCA) \( p<0.001 \), BPSD in terms of Neuropsychiatric Inventory (NPI) \( p<0.001 \) and Cornell Scale for Depression in Dementia (CSDD) \( p<0.001 \), mood and alertness in terms of pleasure and alertness rating of modified Observed Emotion Rating Scale (mOERS) \( p<0.001 \), physical function and ADL in terms of Elderly Mobility Scale (EMS) \( p<0.001 \), Berg Balance Scale (BBS) \( p<0.001 \), Modified Barthel Index (MBI) \( p<0.001 \). The MSM program was appreciated by OAH staffs; they showed high interest to continue the program as patients' improvement in mobility and mood were observed.

Conclusion:
Psychogeriatric outreach group physiotherapy intervention was an effective and safe treatment to dementia patients in OAHs. Exercise incorporating multimodal stimulation was beneficial to patients' cognitive function, mood, alertness and physical function such as balance and ADL and improvement in BPSD. Slowing down deterioration of patients with dementia might extend patients' independence in daily livings and thus reduce the care burden.