The Effectiveness of Non-pharmacological Intervention through Multidisciplinary Approach for Demented Elders

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Introduction
With the rapid ageing population in Hong Kong, there will be relatively more aged groups at risk for dementia. Dementia is one of the main causes of dependence and disability at old ages. These contribute to unnecessary or premature institutionalization of the patient (Yaffe et al, 2002). In view of such needs in the community, Dementia Day Care Centre (DDCC) has been set up in Wong Chuck Hang Hospital since November 2000 for providing non-pharmacological intervention through multidisciplinary approach. It incorporates cognitive training, physical activities and comprehensive family support with knowledge and counselling for those demented elders residing in the community with mild to advanced cognitive impairment.

Objectives
1. To explore the effectiveness of non-pharmacological therapeutic training through multidisciplinary approach for the demented elders
2. To reduce their caregivers’ stress
3. To enhance demented elders’ life satisfaction

Methodology
1. The Chinese version of assessment tools: Mini-Mental State Examination (CMMSE), Dementia Rating Scale (CDRS) and Geriatric Depression Scale short form (GDS) were used for assessing demented elders’ cognitive functioning and level of depression respectively. 2. Elderly Mobility Score (EMS), Tinetti, Functional Reach Test and Time Up and Go Test were used for assessing demented elders’ balance and functional mobility. 3. Relative’s Stress Scale (RSS) and Life Satisfaction Scale
(Client and Carer) were employed to measure the stress level and life satisfaction of the demented elders and caregivers. In addition, paired sample t-tests were used to measure the effectiveness of the therapeutic training.

**Result**

From January to December 2014, 39 demented elders with mean CMMSE score of 20.7 and mean age of 80.5 were recruited and eligible for four months multidisciplinary approach therapeutic training. 7 demented elders had dropped out due to reluctance in participating training and 1 demented elder failed to complete the assessment after training. The result revealed that there was a significant increase in the aspect of Initiation/Preservation and Memory in CDRS, as well as Tinetti Score ($p < 0.01$ and $p=0.01$ respectively). Hence, the result of EMS and Time Up & Go Test were also reached the level of statistical significance ($p=0.03$). In psycho-social aspect, 33% and 24% showed reduction in stress and improved life satisfaction of demented elders, with mean score of 32.0 vs 21.4 and 26.7 vs 33.1 respectively pre and post intervention; whereas the level of life satisfaction of carer, RSS, GDS and CMMSE scores were not found significant difference ($p > 0.05$). Major limitation was the limited sample size and lack of randomization.

**Conclusions**

Dementia is a complex disorder affecting both demented elders and their caregivers. Therapeutic training for them requires integrated multidisciplinary strategies. Physical exercise training appears beneficial to those patients and should be considered as an integral part of therapeutic training. The multidisciplinary approach in non-pharmacological therapeutic training is evidenced in improving their cognitive functioning and functional mobility, while also maintaining an optimal psycho-social functioning. Subsequently, their caregivers can continue to take care of them at home and the health care burden can also be reduced.