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A Pilot Study on Effectiveness of Occupational Therapy Group Therapy Program to Parkinson's Patients in Prevention of Falls & Relief in Carers' Stress
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Introduction
Parkinson’s disease (PD) is a neurodegenerative disease. Fall accidents will aggravate when their disease progresses to intermediate & advanced stage of PD. Recurrent falls & increased fall risks result in increasing PD patients' fear of fall & impede their activity levels which eventually affect their self confidence & social life integration. They also suffer non-motor symptoms of fatigue, depression, anxiety & cognitive impairments. Both motor & non-motor symptoms devastatingly affect patients’ quality of life (Qol) as well as imposing their carers’ stress & burden in fighting this long battle of degenerative disease. However, there is no former study for the effectiveness of a combined group therapy for PD patients & their carers.

Objectives
This study is a pilot prospective study to investigate the effectiveness of occupational therapy group therapy on PD patients in fall prevention & carers’ stress relief, which ultimately to improve the quality of life of PD patients & enhance the carer empowerment.

Methodology
Patients with recurrent fall accidents (>1 fall per month) or with persistent complaints of high fall risks (score >4 from indication in Fall Risk Questionnaire) despite their regular out-patient training will be recruited to the program. 2 therapeutic groups were held from July to December 2015, with each group accommodates 4 patients & their respective carers. They had to participate 8 group therapy sessions on 8 consecutive weeks. This comprehensive program of group therapy included educational sessions on PD & fall prevention, relaxation technique, home exercises
on balance & body integration workout, art & craft as well as dance movement sessions. Patients & carers were evaluated by occupational therapists before & after group therapy sessions using UPDRS, BI, MMSE, MoCA, MDRS, FRQ, GDS, BAI, PDQ8, L-FAI, RSS & CBI.

**Result**

8 patients & 7 carers (total 15 participants) were recruited in this study. Means were compared to investigate the effectiveness of group therapy program in achieving positive outcomes of the study. There is no statistically significance found in all outcome measures. However, results showed clinical improvements in reducing fall risks & patient’s Qol as well as in carers’ stress relief. UPDRS part I showed improvement by almost 31% in patient’s mentation, behavior, & mood. FRQ revealed patient’s self perceived fall risk was reduced by 13.5% & was also shown in item of ‘falling’ in UPDRS part II. PDQ8 showed patient’s Qol has improved by 17% subjectively while RSS showed carer perceived stress has been reduced by almost 30%. Out of those 8 patient subjects, there were 4 patients with frequent recurrent fall history on weekly basis reported no fall accident during group intervention was held & was able to sustain no-fall-record for 2 more weeks after therapeutic group finished. Small sample size & non-blind assessors were the limitations of this study. However, it shows Occupational therapy multi-domain group therapy program is effective for PD patients in fall prevention by reducing their fall risks, to improve their quality of life & lessen their carers’ stress & burden despite statistically not shown in this pilot study.