An innovative Sitting Pilates Program for improving physical and psychological outcomes in people with depression and mood disorders

Kwok KY(1), Chan DYC(1), Chau CKW(1), Chau RMW(1), Wong EYW(1), Lau PMY(2)

(1) Physiotherapy Department, Kowloon Hospital
(2) Physiotherapy Department, Kowloon Central Cluster

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Introduction
Elderly Depressive Disorders are prevalent in Hong Kong (11% in female and 7.2% in male) causing detrimental motivation reduction and physical decline. Pilates exercise is well known as body-mind wellness booster. However, conventional mat work method may not be feasible for elderly. An innovative Sitting Pilates Program was developed to make a mission possible for the elderly.

Objectives
To investigate the effects of a Sitting Pilates Program on physical and psychological outcomes in elders with depressive disorders.

Methodology
A quasi-experimental pilot with single-group Pretest-Posttest design was conducted. Elders attending Psychogeriatric Day Hospital of Kowloon Hospital with diagnosis of depression and mood disorders were recruited. The 40-minute Sitting Pilates Program consisted of 5-minute warm-up, 30-minute of eight kinds of Pilates exercises in sitting and followed by 5-minute of cool-down, delivered at once per week over 12-week duration. Physical outcomes included Elderly Mobility Scale (EMS) for functional mobility; Functional Reach Test (FRT) for balance; 30-s Chair-Stand Test (30-STS) for endurance and Sit & Reach Flexibility Test (S&RT) for flexibility. Geriatric Depression Scale (GDS) was employed to evaluate depression level. Paired t-test was used to analyze the treatment effect. A self-administered evaluation questionnaire was conducted to assess the perceived impact and program evaluation.

Result
Twenty-night elders were recruited (mean age of 76.2±7.2). There were significant improvements in all outcomes post-intervention. Significant improvement in physical outcomes after program completion were detected with functional mobility-EMS from
16.9±4.5 to 17.6±3.8, p=0.009; balance-FRT from 17.5±8.4 to 18.9±8.4, p=0.013; endurance-30-STS from 7.2±4.8 to 8.9±4.7, p<0.001; flexibility-S&RT from -6.1±10.2 to -4.0±9.4, p<0.001. Elders also demonstrated a reduction in GDS from 4.8±2.6 to 3.2±2.5, p<0.001 and reported mood improvement, improved quality of life and were motivated to participate in social activities after the programme (mean rating 8.82-9.47 out of 10).

The results suggested that Sitting Pilates Program was effective and feasible in enhancing clinical outcomes in elders with depressive/mood disorders and poor mobility. Frail elders were empowered to promote their own wellness and enjoyed the fun of popular exercise.