

Effect of the Community Chair-Based Exercise Programme on the Balance of the Elderly in Hong Kong

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Abstract : Introduction: Ageing population is one of the hot topics nowadays in the world and this phenomenon is believed to exacerbate continuously in the future. According to the latest information from World Health Organization (WHO) in 2016, the proportion of people aged more than 60 years is projected to be doubled from 12% in 2015 to 22% in 2050 of the world's population. Similarly, according to figures released by the Census and Statistic Department of Hong Kong in 2015, the contribution of elderly aged more than 65 years olds is projected to increase from 15% in 2014 to 34% in 2064 in local community. On the other hand, falls in elderly is a common problem, and it can bring along many negative consequences among elders, such as reducing their mobility level as well as their quality of life. In addition, it can also increase the caring stress of their family caregivers and as well increase the reliance and burden on the medical care system of Hong Kong. Therefore, appropriate measures should be implemented in order to minimize the risk of fall among elders. The objective of this study is to evaluate the effectiveness of the chair-based exercise programme in affecting the balance of the elderly in Hong Kong. Methods: Thirteen healthy subjects (males = 2; females = 11; mean age: 76.2 ± 7.8 years old) were recruited from an elderly social centre in the community to participate in a structural chair-based exercise programme for 6 weeks (1 session per week; 60-minutes per session). Subjects were being assessed on their balance ability using three commonly used clinical assessments, namely, 1) single leg stance (SLS) test, 2) functional reach test, and 3) 360-degree turn test, before and after their participation in the chair-based exercise programme. Pre and post within-subject comparison was adopted to assess the effectiveness of the programme. Results: There was significant improvement ($p < 0.05$) in all balance parameters of the subjects after their participation in the exercise programme. Elderly demonstrated significant improvement in SLS ($p < 0.012$), functional reach ($p < 0.030$) and 360 degree turn ($p < 0.043$). Conclusions: This study showed that a community chair-based exercise programme is effective in improving the balance ability of the elders. It seems to be another exercise regime that should be promoted among the elders in order to minimize their risk of falls and its negative consequence.

Keywords : balance, chair-based exercise programme, community, elderly

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