Interventions to Improve Physical Capability of Older Adults with Mild Disabilities: A Case Study  
呉承恩, 李開偉, Fan Chia, Wei-Yang Huang  
Industrial Management  
College of Management  
kai@chu.edu.tw

Abstract

Ageing is related to changes in physical health, including loss of mobility and muscle function. It can lead to impaired physical capability and reduced quality of life. The purpose of this study was to investigate whether a physical activity rehabilitation program (PARP) could improve range of joint motion (ROM), grip strength, and gait speed of older adults with mild disabilities. Forty older adults in a long-term care center in Taiwan joined as human participants and were split into control and experimental groups. The participants in the experimental group joined a PARP for eight weeks. The ROM of bodily joints, grip strength, and gait speed of all participants were measured both before and after the eight-week period. The results showed that all the ROMs, grip strength, and gait speed of the participants in the experimental group increased significantly after attending the program. The improvement of the ROMs for male and female participants in the experimental group ranged from 3.8% to 71% and from 7.8% to 75%, respectively. Male participants had greater improvement on gait speed (50%) than their female counterparts (22.9%). Female participants, on the other hand, had greater improvement on grip strength (25.4%) than their male counterparts (20.3%). The ROM, grip strength, and gait speed of the control group, on the other hand, did not change significantly during the same period. The results showed that the PARP adopted in this study was effective in increasing the ROM, grip strength, and gait speed of those who had joined the PARP. This study shows that an eight-week PARP without the use of gym machines was beneficial in reducing sarcopenia in elderly people with mild disabilities.
Keyword: long-term care center; mildly disabled; rehabilitation; range of joint motion