



Service Priorities and Programmes
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Can 4 weeks Baduanjin (八段錦) training help knee osteoarthritis patients reducing pain and improving functional performance immediately?

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Introduction

Osteoarthritis (OA) knee is a common joint disease and a major cause of disability among elderly. The major symptoms of pain and deteriorated functional performance hinder patient activity engagement and they may develop sedentary activity lifestyle. Baduanjin was introduced to OA knee patients in Occupational Therapy Department of Alice Ho Miu Ling Nethersole Hospital to help patients re-integrate active lifestyle with reduced pain level.

Objectives

To evaluate OA knee patients' 1) Pain level and 2) Functional performance after Baduanjin training.

Methodology

The recruited patients practiced 4 sessions of Baduanjin training which were held for one hour once a week. A "Pre-test" versus "Post-test" design was employed and Wilcoxon Signed Ranks Test was used for statistical analysis. Knee pain level was measured by 100mm Visual Analog Scale (VAS). The Knee injury and Osteoarthritis Outcome Score – Physical Function Shortform (KOOS-PS) was used to measure functional level in performing daily activities. Seven items were measured in KOOS-PS: 1) Rising from bed, 2) Putting on socks or stockings, 3) Rising from sitting, 4) Bending to floor, 5) Twisting or pivoting on knee, 6) Kneeling and 7) Squatting. Lower score indicated less difficulty in performing the item.

Result

From April 2017 to October 2017, 29 participants who were scheduled for knee replacement surgery participated in Baduanjin training group. After 4 weeks Baduanjin training, VAS (6.9 ± 1.7 versus 6.4 ± 2.1 , $P < 0.05$) and KOOS-PS twisting or pivoting on knee item (2.7 ± 1.3 versus 2.3 ± 1.2 , $P < 0.05$) were significantly reduced. Other items score in KOOS-PS were reduced but they did not reach significant statistical level. After 4 weeks Baduanjin training for patients with OA knee, their knee pain level and

knee function in twisting or pivoting movement were significantly and immediately improved. Patient's feedbacks were positive - "I often practice Baduanjin with neighbors in the park. I felt relaxed with reduced muscle tightness and comfortable after practice." Regular Baduanjin practice could empower patients living with pain and regain active lifestyle. Besides, weight shift component in Baduanjin exercise could improve neuromuscular knee control in twisting or pivoting movement. Further studies on investigating the long term effects of Baduanjin practice for patients with OA knee were suggested.