

Effects of 12-Week Tai Chi Exercise on Pain, Balance, Muscle Strength, and Physical Functioning in Older Patients with Osteoarthritis : Randomized Trial

Lee, Eun OK* · Song, Rha Yun** · Bae, Sang Chul**

Introduction

The Sun-style Tai Chi exercise has been developed specifically for arthritis patients in order to reduce their symptoms and to improve physical fitness and functioning.

The purposes of this study were to examine the changes in pain, balance, muscle strength and physical functioning in older osteoarthritis patients at the completion of 12 week Tai Chi exercise.

Materials and Methods

The patients with osteoarthritis who signed the consent form were randomly assigned into two groups. Twelve experimental subjects and 9 comparisons completed pretest and posttest measures at 12-week interval with 30% of dropout rate.

Outcome measures were physical fitness and muscle strength (Takei Kiki Kogyo

Co.& Cybex) and physical functioning (Korean-Womac).

Data were entered and analyzed by SPSSWIN 10.0 program. Independence t-test was utilized to examine group differences. The homogeneity test confirmed that there was no significant group difference in demographic data and pretest measures.

Results

The subjects were 64 years of age and have been diagnosed for 9.4 years in average. Most of them were still married (72%), and doing none (59%) or very seldom exercise (23%) previously. Thirty percent of the subjects quit the job due to their illness. At the completion of 12 week Tai Chi exercise, the experimental group reported significantly less pain and less difficulties in activities of daily living. The Tai Chi exercise group showed

* RN, DNS, Seoul National University.

** RN, PhD, Soonchunhyang University.

*** MD, PhD, Hanyang University, Seoul, South Korea

significant improvement in physical functioning while the comparison group reported no change or even worse physical functioning after 12 weeks. In physical fitness test, there were significant improvements in abdominal muscle strength and balance for the Tai Chi group than the comparison group. No significant differences were found in flexibility and muscle strength of the around the knee joint.

Conclusions

In conclusion, Sun-style Tai Chi exercise was safely applied to the older osteoarthritis patients for 12 weeks, and the effects on symptoms, balance, and physical functioning were supported by the results.

Key concepts : Tai Chi, Osteoarthritis