Effects of the Tai Chi Qigong in COPD patients: A Systematic Review and Meta-analysis

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Background
COPD is an irreversible and non-curable disease, and the physical symptoms caused by it cannot be eliminated but improved. Exercise training is important part of pulmonary rehabilitation that it may improve dyspnea and health status and decrease health care use. Based on research findings, Tai Chi Qigong improves lung functions and activity tolerance in COPD patients. Nevertheless, the report reviews studies and meta-analysis before August 2014. Therefore, we wanted to further evaluate the effects of Tai Chi Qigong.

Aims
The purpose of this study is to evaluate the effects of Tai Chi Qigong in COPD patients.

Methods
Identifying the foreground questions and PICO according to 2011 Oxford Centre for Evidence-based Medicine steps. Six databases (Cochrane library, PubMed, MEDLINE, CINAHL, Airiti Library, Index of Taiwan Periodical Literature System) were searched from the earliest year available in August 2017. Searching researches limited on RCT, CCT, Humans, and Adult by using "Tai chi OR Qigong" AND "COPD" as key words. Critical appraisal sheet of RCT of CEBM 2011 was used to exam the validity and reliability. Extracted data were entered and analyzed using Review Manager 5.3.5.

Results
Nine RCT articles (Level of Evidence: Level 2) were included. The results indicate that Tai Chi Qigong can significantly improve quality of life (standardized mean difference= 0.22, 95% CI= 0.06~0.38, p= .007, 594 participants, 6 trials, Figure 1) and 6- minute walking distance (mean difference= 18.91m, 95% CI= 4.41~33.4, p= .01, 459 participants, 5 trials, Figure 2). There was no significant difference in the FEV1 between the intervention group and control group (mean difference= 0.08 liter, 95% CI= -0.01~0.18, p=.09, 369 participants, 3 trials, Figure 3).

Discussion
COPD patients may not be able to carry out exercises at high-intensity levels due to reduced physical abilities. Much of the evidence show the physiological benefit of exercise is based on conventional physical exercise, such as walking, jogging, swimming and cycling. However, Tai Chi Qigong may be a safe and low cost and low -intensity levels excise. It was worthy of applying home and communities.

Conclusion
Tai Chi Qigong could significant improve exercise capacity and quality of life in patients with COPD, but there was no significant difference in lung functions. The findings of this evidence support provided home excise in order to improve activity tolerance for COPD patients. Tai Chi Qigong is suggested the clinical application as a form of traditional Chinese excise for the rehabilitation of patients with COPD.