Tai Chi improves exercise capacity, balance and quality of life in people with COPD: a randomised controlled trial

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Background: Exercise training is one of the most effective strategies for the management of people with chronic obstructive pulmonary disease (COPD). Despite the well-established evidence of the benefits of exercise training in people with COPD, many people still have difficulties accessing such management. To address this unmet need for exercise training, alternative training modes requiring minimum equipment and no fixed venue need to be evaluated. Tai Chi is one such mode of exercise.

Aims: To determine whether short-form Sun-style Tai Chi (SSTC) was effective in improving walking capacity, balance and quality of life in people with chronic obstructive pulmonary disease (COPD) compared to usual medical care.

Methods: This was a randomised controlled trial with assessor blinding. Participants with COPD were recruited at Concord Hospital, Sydney. After confirmation of eligibility, participants were randomly allocated to either the Control Group (CG) (no exercise training) or the Tai Chi Group (TCG). Participants in the TCG trained twice weekly for 12 weeks. Outcome measures were: endurance shuttle walk test (ESWT) time, medial-lateral sway measured by the body sway test and Chronic Respiratory Disease Questionnaire (CRQ).

Results: Of 42 participants (mean (SD) age 73 (8) years, mean FEV₁ 59 (16) % predicted), 38 completed the study (19 in CG and 19 in TCG). Compared to CG, the TCG significantly increased ESWT time (mean difference, 95%CI) (384 seconds, 186 to 510); reduced medial-lateral body sway in semi-tandem stand (-12.4 millimetres, -21 to -3); and increased total CRQ score (11 points, 4 to 18).

Conclusions and Clinical Implications: This study provides compelling evidence that Tai Chi was an effective training modality that improved exercise capacity, quality of life and balance in people with COPD. With increasing numbers of people diagnosed with COPD, such an alternative training modality may provide more opportunities for exercise training.