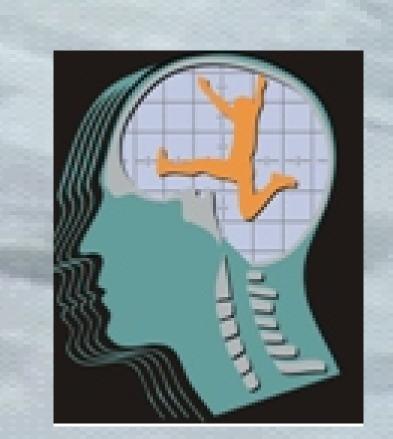


Tai Chi for falls prevention: The effect of group exercise



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Introduction

Tai Chi (TC) is an ancient Chinese martial art form which consists of a series of slow but continuous movements. The reported benefits of TC are numerous and include improvements in psychological well being, flexibility, strength, and balance.

Community TC classes are becoming increasingly accepted by the general public as a form of exercise, and as a falls prevention programme for older adults.

While studies indicate that TC may be beneficial in preventing falls there are inconsistent results. To date studies have failed to compare TC to an active control or to consider the role that participants' perception of participation may have².

We recently completed a trial which found no statistically significant differences in the reduction of falls in community dwelling older adults who participated in group TC (delivered once or twice a week) compared with a group who participated in a low level exercise programme (results reported elsewhere).

The decision to deliver an exercise programme in a group setting is often based on the allocation of health resources however there may be other benefits for such a method of delivery.



Purpose

To explore the reasons why there were no statistically significant differences in the reduction of falls in community dwelling older adults who participated in group TC (delivered once or twice a week) compared with a group who participated in a low level exercise programme.

Participants

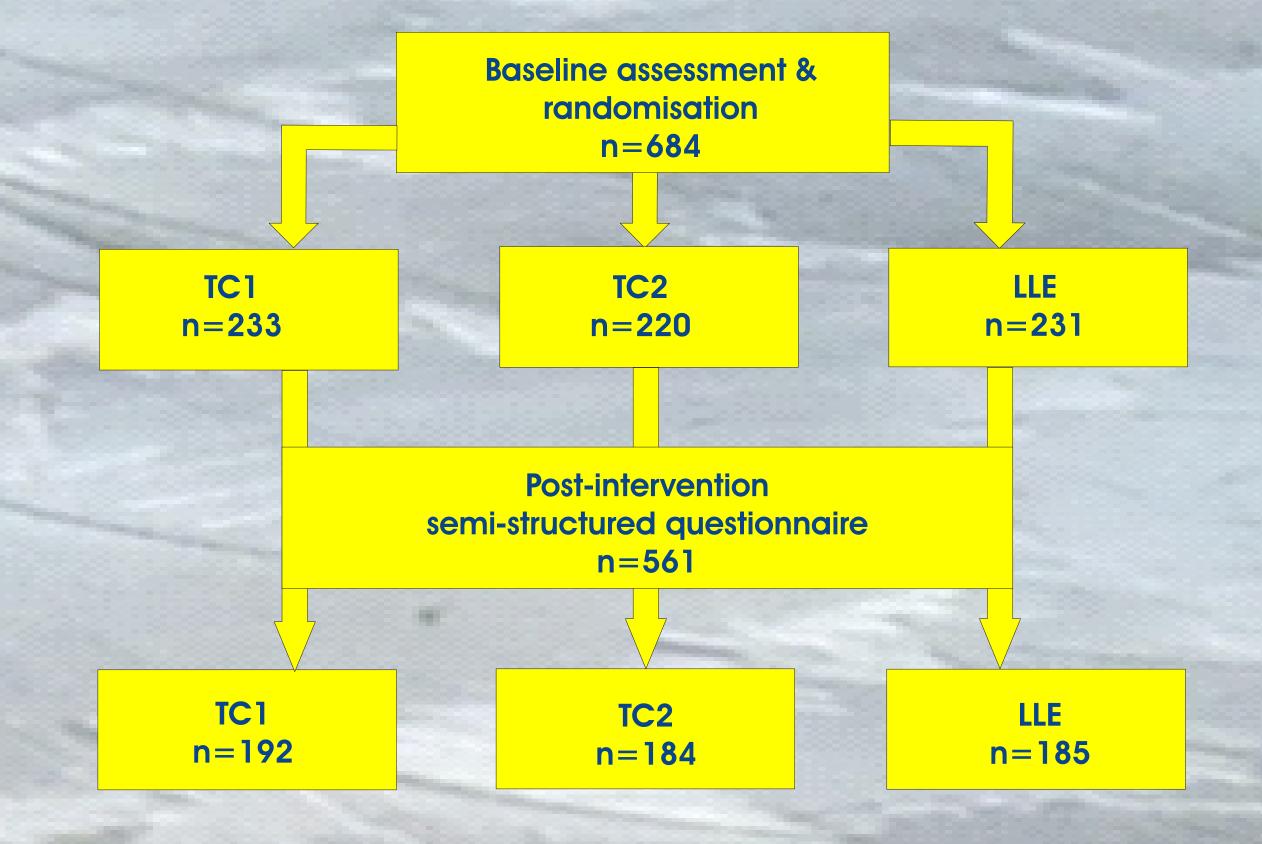
Community dwelling adults aged 65 years or older (or >55 years for Maori or Pacific Islander) with an identified falls risk (n=684).

Method

Single-blinded randomized controlled trial with three arms which were TC once a week (TC1), TC twice a week (TC2) and a low-level exercise programme (LLE).

Each class was 1 hour long and the intervention lasted for 20 weeks.

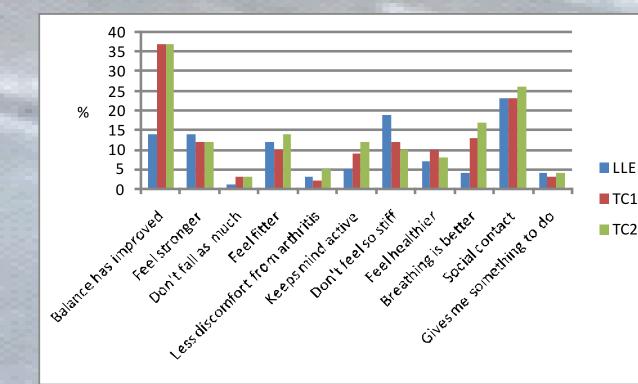
Semi-structured interviews exploring participant's experiences and opinions of different aspects of the exercise programmes were conducted immediately post-intervention.



Results

Questions which explored participants perceived benefits of the programme and aspects they like best are presented here.

The following summarises responses to the question: "What benefits did you gain from attending the programme?"



Not every participant answered every question and some questions were replied to with more than 1 answer.

"Improved balance" was the most common response among the TC groups with "social contact" was the most common response by the LLE group and the 2nd most common from both TC1 and TC2. Some answers included:



More confidence in movement and feel more stable when walking

Meeting new people

in standing!

Happier, livelier, more active and feel good about doing work. Less discomfort with

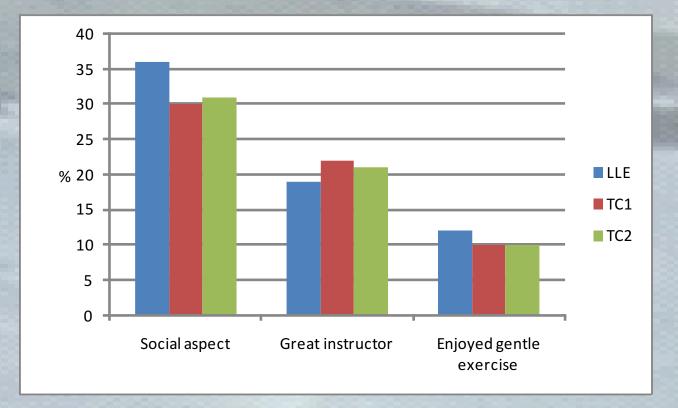
Revived interest in

physical exercise

More awareness of balance limits and

Motivation, being part of a group, got joints moving

The following summarises responses to the question: "what aspects did you like best about participating in the programme?"



"Social aspect" was the most common response from all 3 groups. Some answers were:

Gentle movements, friendliness of class, flexibility of tutors and was nice and enjoyable with people I knew Lots of laughs

Coffee afterwards

Forced regular exercise

Conclusions

Improved balance was reported by over 35% of participants in both TC groups. Less than 15% of participants in the LLE group reported improved balance. Social contact was highly rated by all the participants, with some people extending this beyond the exercise class. A similar finding has been reported in other exercise studies³.

Tai Chi appears to improve peoples perception of their balance ability and community group programmes may offer additional benefit through social contact and accessing the community.

References

- 1 Wang C, Collet JP, & Lau J. (2004). The effect of Tai Chi on health outcomes in patients with chronic conditions: A systematic review. Arch Intern Med, 164(5), 493-
- Gillespie LD, Robertson MC, Gillespie WJ, Lamb SE, Gates S, Cumming RG, Rowe BH. Interventions for preventing falls in older people living in the community. Cochrane Database of Systematic Reviews 2009, Issue 2. Art. No.: CD007146. DOI: 10.1002/14651858.CD007146.pub2.
- 3 McAuley E, Blissmer B, Marquez DX, Jerome GJ, Kramer AF, & Katula J. (2000). Social relations, physical activity, and well-being in older adults. Prev Med, 31(5), 608-

Acknowledgments

Funded by a grant from the Accident Compensation Corporation of New Zealand

The AUT University Ethics Committee (06/67) and the University of Otago Ethics Committee (06/045) approved this study. Presented at World Congress of Physical Therapy 2011, Amsterdam

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