

The effect of six weeks of tai chi practice on anxiety in healthy but stressed people compared to an exercise only comparison group

This trial has been approved by the UTS Human Research Ethics Committee (HREC 2011-107A)

Tai Ji 太极 or *Tai Chi* (TC) is an ancient Chinese mind body exercise that is practised worldwide by millions of people daily with the belief that it has the potent healing effects upon the practitioner and a fundamental path for longevity. Whilst the mechanisms behind TC are not fully understood it is a general consensus among the general population that TC calms the mind and benefits health. There has been growing interest in the scientific community to evaluate the efficacy of TC in various physiological and psychological conditions; in particular the therapeutic effects of TC in psychological conditions.

This study will hope to evaluate whether TC can improve stress level as measured by the State/trait anxiety scale and several objective physiological measures such as blood pressure, heart rate variability and galvanic skin response in a clinical trial with thirty participants.

The participants will be randomly allocated by computer to three equal sized groups (n=10 per group), the TC intervention group, Gym group and Waiting list. The TC intervention group will complete five hours of TC exercise per week (minimum 2 contact hours with the instructor) over a period of six weeks and followed by six weeks of self practise. The gym group will receive 12 weeks of free gym membership at the UTS Fitness centre, whilst the waiting list forms the non-active control group. The waiting list group will however be given six weeks of TC class after the experimental period as thanks for participation in the trial.

Each TC session will consist of ten minutes of warm up, 45 minutes of TC practice and five minutes of cooling down. The TC will be simplified 24 stance taiji quan led by a skilled TC instructor who has been practicing and teaching TC for over 15 years. TC practise component will consist of TC mediative stance for ten minutes followed by going through the set a few movements each time.

A DVD will also be given to each participant of the TC group to encourage home practise as well as refresh the memories in case the participant forgets any movements during private practice.

The primary aim of this study is to evaluate if six weeks of TC practise can significantly reduce levels of stress in healthy but stressed individuals compared to a waiting list and if TC practise is equivalent to standard exercise in controlling stress levels. The trial will also evaluate if the effects of TC practise on stress can also be sustained when individuals are asked to practise without guidance and the comparative results of this compared to both waiting list and standard exercise groups. The primary measure will be the State/trait anxiety inventory and secondary measures will be blood pressure, galvanic skin response, SF36 (Short Form 36 questions to assess general health status), heart rate variability and a Visual Analogue Scale (VAS) on their perceived level of stress.