

EFFECTS OF TAI CHI CHUAN ON THE ANXIETY AND SLEEP QUALITY OF YOUNG ADULTS

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TAI CHI CHUAN - WHAT IS IT?

- A traditional Chinese martial art with multiple intervention components (Wayne & Kaptchuk, 2008)
 - Musculoskeletal strength, flexibility and efficiency
 - Breathing
 - Concentration, attention and mindfulness
 - Imagery, visualization, and intention
 - Physical touch and subtle energy
 - Psychosocial interactions
 - Alternative health paradigm and philosophy
 - Rituals, icons, and environment

WHY STUDY TAI CHI IN YOUNG ADULTS?

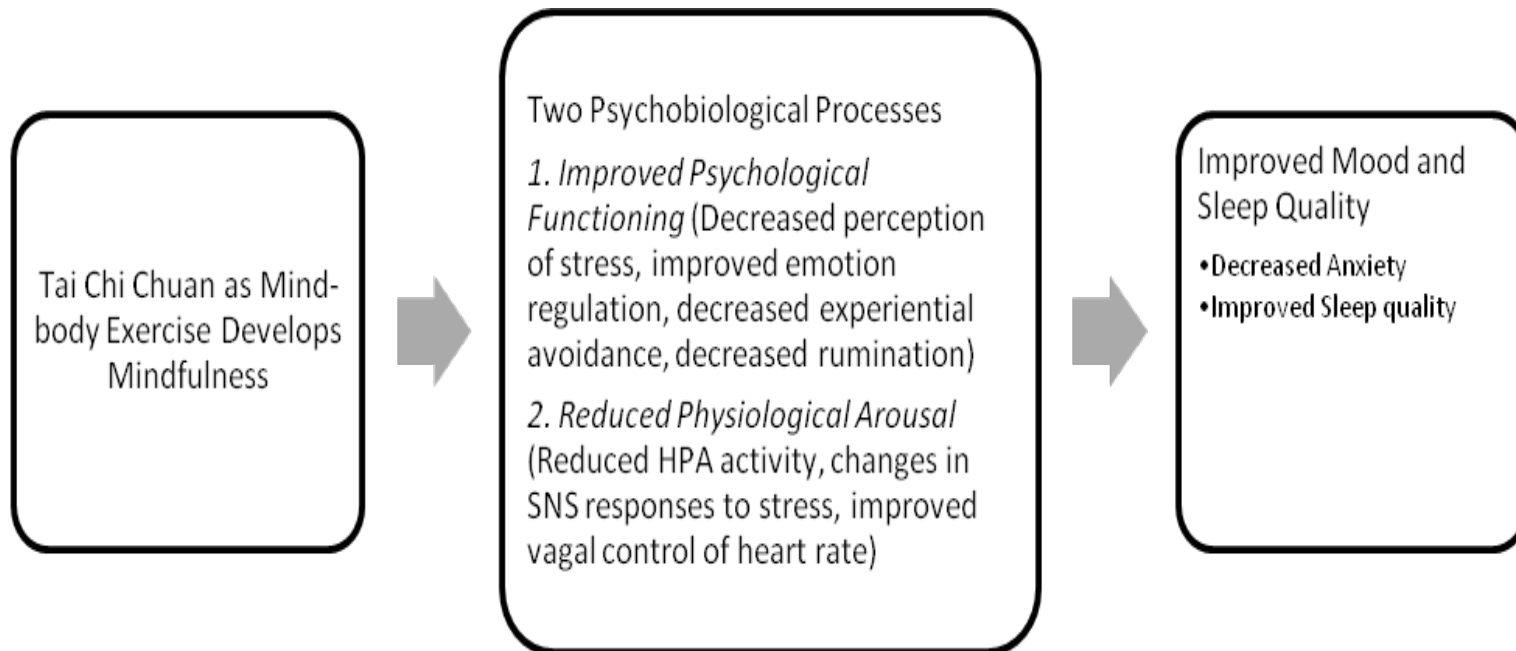
- Often a high stress stage of life
- 2008 American College Health Survey results at ASU the most frequent factors negatively impacting academic performance within the last 12 months: stress (20.3%), sleep difficulties (16.5%), anxiety (14.6%)
- Meta- analysis found tai chi to have moderate effect sizes on symptoms of anxiety (Hedges' $g = 0.66$, in Wang et al., 2010)

PREVIOUS STUDIES

- ◉ Tai chi chuan classes at ASU - increases in mindfulness associated with improved sleep, self-regulatory self-efficacy, mood and perception of stress (Caldwell et al., 2010, 2011)
- ◉ Increases in mindfulness across the semester for tai chi students while no change in control group (Caldwell 2011).
- ◉ Sleep improved for tai chi participants but not for control group.
- ◉ Stress perception did not change for tai chi students but worsened for control group.

CURRENT FEASIBILITY STUDY

◉ Exploratory psychobiological processes



DESIGN OF PILOT STUDY

- Randomize 80 participants to one of three arms:
 - (1) educational materials,
 - (2) 10 weeks of tai chi classes,
 - (3) 10 weeks of tai chi classes plus DVD with instruction

<http://www.chentaiji.com/books/>

- Measures taken pre-, 4th week, and post- (anxiety & sleep also at 2 month follow-up):
 - State-Trait Anxiety Inventory
 - Mindfulness, Perceived Stress, Experiential Avoidance
 - Sleep quality - both self-report and ambulatory sleep architecture monitor
 - Physiological arousal - salivary cortisol, salivary alpha-amylase, and cardiac autonomic modulation

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