Title:
Reducing Test Anxiety Through Mind Relaxation

Kathleen R. Ward, MSN¹
Tanya L. Smith, MSN¹
Lindsey Gordon, MS²

¹Department of Nursing, Fort Hays State University, Hays, KS, USA
²South Central Mental Health Counseling Center, Wichita, KS, USA

Session Title:
Research Poster Session 3

Slot (superslotted):
RSC PST 3: Sunday, 30 July 2017: 9:45 AM-10:15 AM
Slot (superslotted):
RSC PST 3: Sunday, 30 July 2017: 12:00 PM-1:15 PM
Slot (superslotted):
RSC PST 3: Sunday, 30 July 2017: 2:00 PM-2:30 PM

Keywords:
Nursing Students, Tai Chi and Test Anxiety

References:


**Abstract Summary:**
The purpose of this experimental study is to identify the effects of a Tai Chi intervention on nursing students’ test anxiety. Research supports the use of Tai Chi for psychological well-being and stress reduction, however the use of Tai Chi and nursing student test anxiety is limited.

**Learning Activity:**

| LEARNING OBJECTIVES | EXPANDED CONTENT OUTLINE |
Delineate the usefulness of a mind relaxation strategy on managing test anxiety.

The effects of a mind relaxation intervention relative to test anxiety will be disseminated through the findings at the conference.

Create a mindful relaxation intervention that influences educational outcomes.

Our intervention process will be described on a level that allows for replication.

Discriminate the optimum level of anxiety for learning.

A justification of the Yerkes-Dodson Law will be studied to help the learner understand the level of anxiety for optimal performance on any given task.

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**Abstract Text:**

**Purpose:** The purpose of this study is to identify the effect of a Tai Chi (mind relaxation) intervention on test anxiety.

**Methods:** Anxiety and stress are relative in situations that provoke feelings of “fight or flight” (Selye, 1976). These feelings are often experienced by nursing students during course exams. According to Gibson (2014, p.267), test anxiety attributes include: “administration of a test, negative subjective feelings, behavioral aspects, physical signs, and cognitive aspects”. The greater the stimulus the less effective the performance on any given task (Yerkes & Dodson, 1908). According to the Yerkes-Dodson Law (1908), low and high levels of anxiety hinder optimum performance, whereas performance is enhanced at mid-levels of arousal or anxiety. Systematic reviews and meta-analysis have shown Tai Chi to be an effective intervention for anxiety reduction and psychological well-being (Sharma & Haider, 2015; Wang et al., 2013)

Tai Chi is a form of Chinese exercise that incorporates “slow, smooth body movements to achieve a state of relaxation of both mind and body” (The Free Dictionary, n. d.). The use of Tai Chi in education is well documented. Wall (2005), conducted a study using Tai Chi and mindfulness-based stress reduction on middle school students. These results demonstrated that Tai Chi instilled “well-being, calmness, and relaxation” in middle school students. Tai chi interventions have also been incorporated into high school and college settings with mixed results. Lee et al., (2012), noted no difference in stress levels of secondary (junior) school students before and after the Tai Chi intervention. On the college level, the physical and mental health of college students were significantly improved after a Tai Chi intervention (Wang, Taylor, Pearl, & Chang, 2004).

Specific to nursing, Edelman & Ficorelli (2005) conducted a qualitative study to determine the lived experience of nursing student’s test anxiety. The analysis of the data reflected three themes; one of those being the fear of not becoming a nurse relative to not passing nursing tests, increasing test anxiety. Malinski & Todaro-Franceschi (2011) implemented a co-meditation intervention that successfully reduced anxiety in a nursing school setting. Specific to test anxiety, Prato & Yucha (2013) provided training in biofeedback-assisted relaxation intervention producing a decrease in physiological responses to stress, lacking change in subjective test anxiety scores. A Tai Chi intervention was utilized in a study by Mulcahy, Gosselin, Holland, & Pittman (2016) to determine the effect on simulation anxiety. The findings indicated that Tai Chi was effective in reducing student anxiety as well as improving simulation performance. Despite the number of studies on nursing students and the use of a Tai Chi intervention, the number of studies relative to test anxiety and nursing students is limited.

Based on this information the researchers hypothesized utilizing a Tai Chi intervention prior to nursing examinations to assess the effect on test anxiety. Approval was obtained from the University’s Institutional Review Board. At the beginning of the spring 2017 semester nursing students in the Health and Illness II course will be invited to participate in the investigation. Informed consents will be obtained. Consenting students will be randomly assigned to the control and experimental
Baseline anxiety levels and pulse rates will be obtained on all participating students. Baseline anxiety levels of all students will be assessed utilizing the Generalized Anxiety Disorder 7-item Scale (GAD)-7. The GAD-7 has been shown to be a valid tool for assessing Generalized Anxiety in practice and research (Spitzer, Kroenke, Willimas, & Lowe, 2006). The anxiety levels and pulse rates will be obtained prior to the Tai Chi intervention and again immediately prior to the exam. Students in the experimental group will engage in a fifteen-minute beginning Tai Chi intervention prior to each exam during the semester. The control group will continue in their normal routine prior to exams with anxiety levels and pulse rates being obtained immediately prior to the exams. All anxiety levels during the study will be assessed utilizing the self-report Zero-to-Ten Anxiety Scale and all pulse rates will be assessed utilizing the Smart Pulse Advanced Finger Oximeter. According to Crandall, Lammers, Senders, Savedra, & Braun (2007), the Zero-to-Ten Anxiety Scale has been shown to have validity as a self-report scale to assess state anxiety in children.

**Results:** After the final exam in the course the data will be analyzed to answer the specific research questions for this study. Is there a difference in participants’ state anxiety scores before and after the Tai Chi intervention? Is there a difference in participant’s pulse rate before and after Tai Chi? Does a Tai Chi intervention reduce anxiety to a mid-level for optimum performance? Utilizing a Statistical Package for the Social Science (SPSS) software system, the projected data methods of independent and dependent t-tests will be employed to analyze the data. Findings from this study will be shared as aggregate data during the 28th International Nursing Research Congress. During the fall 2016 semester a pilot study was conducted prior to one exam utilizing a different cohort than projected for the spring 2017 semester. The pilot study only measured anxiety after eight minutes of Tai Chi. Findings demonstrated a reduction in test anxiety prior to the exam for the majority of the class. One student experienced an adverse level of test anxiety due to having to wait eight more minutes to take the test.

**Conclusion:** If there is a positive association between mind relaxation and a reduction of test anxiety to a level that improves student outcomes the intervention may continue to benefit students and others, in all education venues and lifetime experiences. This interprofessional collaboration of nursing and psychology conforms to the core competencies for interprofessional collaborative practice specifically: core competency TT3: Engage other health professionals—appropriate to the specific care situation—in shared patient (student)-centered problem-solving (Interprofessional Education Collaborative Expert Panel, 2011). The collaboration with psychology enhances the value of the results, as the outcomes have been analyzed by an individual within the discipline of psychology. This also emphasizes to students that nursing is an interprofessional discipline.