

# Washington State University

College of Education

## Sara Thompson

Will defend the Thesis on

Date: April 10, 2024

Time: 1:00 P.M.

Pullman Campus – Physical Education Building 103

*Faculty, students and the general public are encouraged to attend*

### **THE EFFECTS OF ATTENTIONAL STRATEGIES ON PAIN TOLERANCE AND AFFECTIVE RESPONSES DURING ISOMETRIC CONTRACTION EXERCISES**

Chair: Sarah Ullrich-French

Maintaining regular exercise is difficult for many individuals. Strategies are needed to help overcome barriers to exercise, such as pain and discomfort. During isometric contraction exercises, pain during exercise through interoceptive feedback is a common reason individuals stop the exercise. One strategy tests associative and dissociative attention during exercise. Dissociation leads to more pleasant exercise experiences compared to associative attention in untrained individuals. However, recent evidence suggests mindful association can also be a pleasant experience. Therefore, this study tested if a mindfulness (associative) strategy during isometric contraction exercises differed from a mental math (dissociative) strategy on core affect, pain tolerance, mindful reappraisal of pain, and remembered and forecasted affect. An active sample ( $N=31$ ,  $M_{age}=21.29$ , 54.8% female) participated in a between-subjects experiment consisting of a randomly assigned attentional strategy (either mindfulness or mental math) to use during a plank and wall-sit exercise. Participants were taught the strategy in a baseline session and asked to practice the strategy before returning to the experimental session 2-3 days later. Preliminary results reveal those who used the mindful strategy during a plank had higher pain tolerance ( $p=.02$ ) compared to those using the mental math strategy. Participants in the mindful strategy condition were also more detached from negative thoughts and feelings associated with pain during a wall-sit ( $p=.03$ ) and a plank ( $p=.01$ ), compared to the mental math condition. Experimental manipulation was supported with higher ( $p<.05$ ) state mindfulness and internal attentional focus in the mindful compared to the mental math condition. Results suggest the use of a mindful associative strategy can lead to the ability to hold a plank longer and be more mindfully detached from the pain compared to using a dissociative distraction strategy.