

Washington State University

College of Education

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Will defend the Thesis on

Date: April 18, 2024

Time: 3:00 P.M.

Pullman Campus – Physical Education Building (PEB) 103

Faculty, students and the general public are encouraged to attend

EFFECTS OF BLOCKED AND PERIODIC INTERVAL TRAINING ON CARDIORESPIRATORY FITNESS AND AFFECTIVE RESPONSES AMONG COLLEGE STUDENTS

Chair: Chris Connolly

Physical activity (PA), defined as any bodily movement produced by the contraction of skeletal muscle that increases energy expenditure above a basal level, is negatively associated with adverse health outcomes and positively associated with health and fitness. However, 46% of all American adults are not meeting aerobic PA guidelines (i.e., 150 minutes of moderate-intensity activity, 75 minutes of vigorous-intensity activity, or equivalent combination), and of those not meeting guidelines, more than half did not engage in any purposeful aerobic PA whatsoever. Perceived lack of time is the most cited barrier to PA in young adults and may partially explain the above findings. Interval training (IT) has emerged as an effective, time-efficient mode of exercise as a means of potentially attenuating the time barrier, thus enabling young adults to meet PA guidelines. The purpose of this study was to compare different weekly frequencies of interval training on cardiorespiratory fitness adaptations and affective responses among university students. Fourteen students were recruited and randomly assigned into a six-week exercise intervention group. The "blocked" group (HIIT₁) performed the weekly recommended exercise volume in one session every week. The "periodic" group (HIIT₃) performed the same volume spread out across three weekly sessions. Baseline and post-intervention graded exercise testing was conducted to compare differences in cardiorespiratory fitness improvements; differences will be assessed by one-way analysis of variance. Affective responses will be recorded during the intervention and analyzed using independent t-tests. Results will be posted following completion of post-intervention testing. It is hypothesized that the HIIT₃ group will have greater improvements in cardiorespiratory fitness and higher affect scores compared to the HIIT₁ group.