

Abstract
Poster Session C

Friday, November 15, 2019 8:00 am – 9:30 am

AGING AND DEMENTIA: HEALTHY AGING AND COGNITION

C-20

Cardiorespiratory Fitness Predicts Processing Speed Performance in Urban Latin Americans

Alioto A, Conde K, Salazar-Villanea M, Moncada-Jimenez J, Cahn-Weiner D, Johnson D

Objective: There is evidence that cardiorespiratory fitness (CRF) protects against age-related declines in processing speed (PS), but studies investigating older adults living in low and middle-income countries are lacking. We used data from the Epidemiology and Development of Alzheimer's Disease (EDAD) study to investigate the role of CRF on PS in older Costa Rican adults. **Method:** 306 community dwelling older adults (mean age = 69) were recruited for a study on cognition and physical fitness. We used a regression model to test the association between CRF and a composite measure of PS (Digit Symbol, Trails A, Block Design, and Stroop Color Naming). Confirmatory factor analysis (CFA) with full information maximum likelihood was conducted in a nested multi-step process on subtest scores. We also compared the strength of the relationship between two measures of CRF: Maximal oxygen uptake (V02 peak) and a latent variable comprised of distance achieved during the 6-minute Walk Test and change in heart rate before and after walking (Modified 6-Minute Walk). **Results:** Higher CRF was significantly associated with PS, and the association remained significant after controlling for age and sex ($B = 0.21$; $p < .001$). The strength of the relationship between two measures of CRF was very high, suggesting equivalence of these indices. **Conclusion(s):** CRF and PS are clinically meaningful therapeutic targets for future prevention trials in Latin America. The modified 6-Minute Walk is an efficient approximation of the gold standard CRF measurement. The cognitive benefits of CRF should be compared to other lifestyle interventions (e.g., diet) to determine the active components of cognitive improvement.