

exercise program (HEP- phase 2-p2) could enhance physical activity (PA) behavior, and can be used as a maintenance therapy in PwCS. However, traditionally structured HEP are interfaced with impediments for employing best practice for fall prevention safety approach at home settings in PwCS, thus, making it essential to evaluate training strategies that foster safety. Aim: To evaluate the feasibility, compliance, and safety of a safety harness augmented rehabilitation using DBExG training paradigm (SHARP).

Methods: Community-dwelling PwCS (n=7) participated in the study and received DBExG training using the commercially available Kinect dance gaming “Just Dance 3”. The first 6 weeks training (20 sessions) was provided in the laboratory setting (health coach stand by assistance – SBA). Followed with 4 more weeks (12 sessions) of SHARP in the participant’s house with health coach SBA.

Results: The primary focus was feasibility, addressed by acceptability, and retention. All the seven participants completed the laboratory, and home-based DBExG. All participants reported enjoying the sessions and felt they were beneficial. Study retention and session adherence was 90% and 98%, at p1, and p2 respectively. There were no falls, and adverse safety events reported in either phase of the study. The intervention was safe with no falls, and major adverse events.

Conclusion: SHARP appears feasible and safe, thus promising for home-based PA rehabilitation for PwCS. A larger randomized controlled trial is recommended to further investigate efficacy.

PHYSICAL FITNESS MODERATES THE AGE-RELATED ASSOCIATION BETWEEN EXECUTIVE FUNCTIONING AND MOBILITY

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In older adults, executive functions are important for daily-life function and mobility. Evidence suggests that the relationship between cognition and mobility is dynamic and could vary according to individual factors, but whether cardiorespiratory fitness reduces the age-related increase of interdependence between mobility and cognition remains unexplored. One hundred eighty-nine participants (aged 50-87) were divided into three groups according to their age: middle-aged (MA; < 65), young older adults (YOA; 65-74), and old older adults (OOA; ≥75). Participants performed Timed Up and Go and executive functioning assessments (Oral Trail Making Test and Phonologic verbal fluency) remotely by videoconference. Participants completed the Matthews questionnaire to estimate their cardiorespiratory fitness (VO₂ max in ml/min/kg). A three-way moderation was used to address whether cardiorespiratory fitness interacts with age to moderate the relationship between cognition and mobility. Results showed that the cardiorespiratory fitness x age interaction moderated the association between executive functioning and mobility ($\beta = -.05$, $p = .047$) ($R^2 = .18$, $p < .0001$). At lower levels of physical fitness (< 19.16 ml/min/kg), executive functioning significantly influenced YOA’s

mobility ($\beta = -.48$, $p = .004$) and to a greater extent OOA’s mobility ($\beta = -.96$, $p = .002$). Our results support the idea of a dynamic relationship between mobility and executive functioning during aging and suggest that physical fitness could play a significant role in reducing their interdependency.

THE EFFECT OF ACTIGRAPHY MEASURED PHYSICAL ACTIVITY ON EXECUTIVE FUNCTION IN OLDER ADULTS

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Executive function (i.e., decision making, self-control, planning) is important for facilitating independent living in older adults. Physical activity may preserve executive function, but previous research has demonstrated sex differences in both physical activity and executive function among older adults. Few studies have investigated sex differences in the association between the two. We examined associations between objectively measured physical activity and executive function with attention to sex differences. We recruited N = 204 participants (Mage =71, SD=6.36; 57% women) with (n=47) and without (n=157) Alzheimer’s disease from the University of Kansas Alzheimer’s Disease Research Center. We used wrist-worn accelerometers (Actigraph GT9X) to measure physical activity 24 hours a day for 7 days in a free-living environment. We categorized physical activity as moderate to vigorous (MVPA) based on the Montoye (2020) Adult Vector Magnitude cut-points. We evaluated sex differences in the association between executive function and MVPA using multiple regression with an interaction term, adjusting for age, education, and dementia status. We used a composite score to combine tests of executive function (Digit Symbol Substitution, Stroop Interference, Trail making Part B, and Verbal Fluency). Results indicated, older age and lower education were associated with lower executive function scores ($\beta = -2.12$, $p < 0.001$; $B = 2.13$, $p < .05$). In contrast to previous research, we did not find evidence for sex differences in the MVPA, executive function, nor the association between the two in our sample. Future research should investigate whether individualized exercise-based interventions and treatment between men and women may differentially benefit cognitive function.

PHYSICAL ACTIVITY MEDIATES LATIN DANCE PARTICIPATION AND FITNESS OUTCOMES IN OLDER LATINOS

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Background: The benefits of engaging in physical activity (PA) for older adults (OA) are well documented; however, participation rates remain low, especially among OA Latinos. Latin dance expresses and promotes culture among Latinos,