

0.02). Age interactions indicate that findings were stronger for younger participants. Greater cumulative stress is associated with poorer cognitive function in some domains in older AA. A comprehensive assessment of cumulative stress is vital in understanding the dimensionality of racialized stress for older adults potentially experiencing cognitive decline.

#### GREATER ADOLESCENT COGNITIVE ABILITY LINKED TO LOWER RISK OF EARLIER MORTALITY

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There have been few investigations of the role that adolescent cognitive ability might play in predicting physical resilience across the life course, including decreased risk of early mortality. Our limited knowledge of how multiple cognitive ability domains shape trajectories of longevity is due, in part, to a lack of aging cohorts with early life cognitive assessments, and family data that allow for examination of shared family and genetic characteristics that may play a role in cognitive ability-health links. We capitalized on data from the 1960 Project Talent high school cohort ( $n > 360,000$ , born 1942-1946) and mortality data ( $n = 22,584$ ; 5,497 deceased) collected as part of two recent follow-ups, the Project Talent Twin & Sibling Study and the Project Talent Aging Study, to examine these potential associations. In 1960, ability was assessed in multiple cognitive domains (e.g., general aptitude, quantitative, reasoning). Mortality status was ascertained through 2016. Binary logistic generalized estimating equations with race, age, sex, and adolescent family SES covariates, indicated that each 1 standard deviation higher ability in multiple cognitive domains in adolescence predicted lower odds of earlier mortality (ORs of 0.79 - 0.87). Co-sibling control models indicated a similar pattern, suggesting that benefits associated with higher cognitive performance do not simply reflect shared environmental and genetic background, but may represent a direct protective effect. These findings indicate that better performance in multiple cognitive domains in adolescence, above and beyond the influence of genetic and family environmental factors, may be or point to modifiable protective factors against risk of early mortality.

#### LONG-TERM COGNITIVE EFFECTS FROM A REAL-WORLD MULTI-SKILL LEARNING INTERVENTION IN OLDER ADULTS

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Previous cognitive learning interventions have focused primarily on learning one or two novel real-world skills at a

time, or utilizing computer-based programs to enhance specific cognitive skills (Ball et. al 2002; Park et. al, 2014). While these studies yielded immediate cognitive improvements in participants, the long-term benefits of continuing to learn several real-world skills in older adulthood is unclear. In the present two studies, the long-term (1-year post-intervention) benefits of a multi-skill learning intervention were investigated with older adult participants. Study 1 (a pilot sample) included 6 participants (67% female,  $M = 66.33$  years,  $SD = 6.41$ , range = 58-74 years old) and Study 2 included 27 participants (67% female,  $M = 69.44$  years,  $SD = 7.12$ , range = 58-86 years old). Following a three month intervention which entailed simultaneously learning at least three real-world skills, such as photography, drawing, and Spanish, participants' cognitive abilities were assessed using four tasks (Flanker, Set-Shifting, Dot Counting, and N-Back), as well as RAVLT and Digit Span. Follow-up assessments were completed at three-, six-, and 12-month follow-ups after the interventions. Linear mixed-effects regression models revealed significant cognitive improvements across time points up to one year following the intervention compared to baseline assessments. These promising results support the idea that intense learning experiences may lead to considerable cognitive growth in older adulthood, as they do earlier in the lifespan.

#### THE DUAL-LANGUAGE SEMANTIC COMPUTERIZED PROGRAM (DISC) MAINTAINED LOCAL SWITCH COSTS IN MCI OLDER ADULTS

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It has been proposed that switching cost deficit in executive control (Velichkovsky et al., 2020) could be used as an early marker for abnormal aging processes. Although research with technology-based intervention has shown benefits in improving cognitive performance with older adults, the overall results are mixed (Ge et al, 2018). This study aims to investigate whether computerized intervention program (e.g., DISC) would help to reduce the switching costs deficits in mild-to-moderate cognitively-impaired older adults (MCI-OA). Fourteen MCI-OA ( $79.75 \pm 6.94$ ) and 9 cognitively-healthy OA (age  $77.25 \pm 6.9$ ) were randomly assigned to an experimental group or a control group (a final sample size of 30 MCI and 40 cognitive-healthy older adults would be ready by conference time). All participants first completed a set of cognitive tasks as part of a larger study (i.e., pre-tests) (e.g., MMSE, Ravens, cued-base Task Switching Task). The experimental group then played cognitive games on a touch-screen tablet for about 30-40 minutes per session with a total of 24 sessions over 8-12 weeks. The control group continued their daily activity as per usual for 8-12 weeks. Participants were then asked to complete the same set of cognitive tasks again post-test. Control group MCI-OA performed worse for the local costs in the cued Task Switching task ( $p < .05$ ), whereas experimental group MCI-OA maintained their performance ( $p = .40$ ) post-test compared to pre-test. All cognitively-healthy OA did not