

and crystallized intelligence (score on WASI-I Vocabulary subtest) on performance across several neuropsychological tests assessing i.) verbal memory, ii.) visual memory, iii.) attention, concentration, and working memory, iv.) executive functioning, v.) visuospatial processing, and vi.) language. Composite scores for all six cognitive domains were calculated by averaging converted z-scores on domain-specific tests of neuropsychological functioning. A series of regression models were then constructed to evaluate the relationship between CR and late-life cognitive functioning. To determine the relative importance of each CR proxy, a follow-up relative weight analysis (RWA) was performed for each regression model.

Results: After controlling for age, gender, cardiovascular risk, and depression, our composite measure of CR (average z-score of educational attainment, mental workplace demands, crystallized intelligence) proved to be a significant predictor across all domains of cognitive functioning. Of the six cognitive domains assessed, CR was the most important in predicting higher-order cognitive functions, such as working memory and executive functioning. Out of the three CR proxies, crystallized intelligence was the only CR proxy that significantly predicted performance across all six cognitive domains. RWA revealed that crystallized intelligence was the most important in predicting neuropsychological functioning, followed by educational attainment, and mental workplace demands.

Conclusions: Despite being closely related, all three CR proxies demonstrated differential effects on late-life cognitive functioning. Overall, our findings suggest that the effects of CR are not generalizable across all cognitive domains and appears to be somewhat dependent on the CR proxy used. This study supports the existing literature in demonstrating the robustness of crystallized intelligence as a CR proxy and provides preliminary evidence supporting the idea that tasks that require higher levels of cognitive processing are the most influenced by CR.

Categories: Aging

Keyword 1: cognitive reserve

Keyword 2: aging (normal)

Keyword 3: cognitive functioning

Correspondence: Jarod Joshi, Department of Psychology, University of Windsor, Windsor, Ontario, Canada, Email: joshi29@uwindsor.ca

27 Aging Affects Cordoba Naming Test Performance

Jasman Sidhu^{1,2}, Krithika Sivaramakrishnan^{1,2}, Raymundo Cervantes^{3,2}, Sarah Saravia², Luz Estrada⁴, Dulce Garcia⁴, Alexia Barrio⁴, Isabel D. Munoz^{5,2}, Enrique Lopez², Tara L. Victor^{3,2}, Alberto L. Fernandez⁶, Daniel W. Lopez-Hernandez^{2,7}

¹California State University, Fresno, Fresno, CA, USA. ²The Lundquist Institute, Torrance, CA, USA. ³California State University, Dominguez Hills, Dominguez Hills, CA, USA. ⁴Tecnológico de Monterrey, Monterrey, Nuevo Leon., Mexico. ⁵California State University, Northridge, Northridge, CA, USA. ⁶National University of Cordoba, Cordoba, Argentina. ⁷University of California San Diego Health, San Diego, CA, USA

Objective: The Cordoba Naming Test (CNT) is a 30-item confrontation naming test developed in Argentina. A common confrontation naming task used in the United States is the Boston Naming Test (BNT). Research shows that age affects BNT performance in the 60-item long form. In fact, studies show that scores on confrontation naming tasks increase in childhood and continue to improve until approximately 40 years of age. However, after this period, scores start to subsequently decline, and especially so after 70 years of age. On the other hand, some studies have reported that older adults maintain high BNT performance despite advancing age. To our knowledge, no study has investigated the aging effects of the CNT across various age groups. We expected CNT scores to increase significantly from young adulthood to mid-adulthood and then significantly decline with advancing age.

Participants and Methods: The present study sample consisted of 272 neurologically and psychologically healthy participants with a mean age of 27.06 (SD = 12.21) with 14.29 years of education completed (SD = 2.46). Participants were divided into six different age groups: 18-19-year-old group, 20-29-year-old group, 30-39-year-old group, 40-49-year-old group, 50-59-

year-old group, and 60-69-year-old group. All participants consented to voluntary participation and completed the CNT and a comprehensive background questionnaire in English. The CNT consisted of 30 black and white line drawings, ranging from easy to hard difficulty. An ANCOVA, controlling for gender, was used to evaluate CNT performance between the six age groups. We used a threshold of $p < .05$ for statistical significance.

Results: Results revealed significant group differences between the six age groups on the CNT, $p = .000$, $\eta^2 = .14$. A post-hoc test revealed that the 30-39-year-old group outperformed the 18-19-year-old, 20-29-year-old, and 60-69-year-old groups on the CNT. Finally, the 40-49-year-old group outperformed the 18-19-year-old and 60-69-year-old groups on the CNT.

Conclusions: As we predicted, participants demonstrated steady improvement in the CNT until the age of 40. However, we found that until the age of 60, CNT performance started to decline significantly. Our data suggests that CNT performance declines significantly at the age of 60 compared to previous research using the BNT. Research shows other demographic variables (e.g., gender, linguistic factors) influence BNT performance. Future investigations on the CNT using a healthy sample should use a multivariate statistical analysis method to help explain influencing factors across aging. This research can have the potential to improve public health to better support and understand individuals from diverse backgrounds.

Categories: Aging

Keyword 1: aging (normal)

Keyword 2: language

Keyword 3: cross-cultural issues

Correspondence: Daniel W. Lopez-Hernandez, University of California San Diego Health, wdlopez31@gmail.com

28 Variability in Remote, Self-Administered Assessment Performance Associated with Self-Reported Memory Perceptions Among Older Adults

Jennifer R. Strenger¹, Natalie Riera², Karra Harrington³, Nelson Roque⁴, Stephen Salloway¹, Martin Sliwinski³, Louisa I. Thompson¹

¹Brown University, Providence, RI, USA. ²Brown University, Providence, Rhode Island, USA. ³Penn State University, University Park, PA, USA. ⁴University of Central Florida, Orlando, FL, USA

Objective: Remote assessment for cognitive screening and monitoring in the elderly has many potential advantages, including improved convenience/access and ease of repeat testing. As remote testing becomes more feasible and common, it is important to examine what factors might influence performance and adherence with these new methods. Personal beliefs about one's ability to remember effectively have been shown to impact memory performance, especially in older adults (Lineweaver & Hertzog, 1998). The perception of a low level of personal control over memory may impact a person's use of memory strategies which might otherwise enhance performance, as well as their beliefs about the efficacy of those strategies (Lineweaver et al., 2021). The present study examined the relationship between perceived memory self-efficacy and performance and adherence on self-administered, smartphone-based remote cognitive assessments.

Participants and Methods: Participants were 123 cognitively unimpaired adults (ages 55-80, 68.3% female, 87% White, $M = 16.5$ years of education) recruited from the Butler Hospital Alzheimer's Prevention Registry as part of an ongoing study evaluating novel cognitive assessment methods. A cutoff of score of ≥ 34 on the modified Telephone Interview for Cognitive Status (TICS_m) was required for enrollment. Perceived memory self-efficacy was assessed using two subscales of the Personal Beliefs about Memory Instrument (PBMI; Lineweaver et al., 1998): "prospective control", the perception of control one currently has to influence future memory functioning, and "future control", the perception of the amount of control over memory function one will have in the future. Participants completed three brief self-administered cognitive testing sessions per day for 8 consecutive days using a mobile app-based platform developed as part of the National Institute of Aging's Mobile Toolbox initiative. Cognitive tasks assessed visual working memory (WM), processing speed (PS), and episodic memory (EM) (see Thompson et al., 2022).

Results: Statistical analyses were conducted using univariate ANOVA tests to look for main