

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

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

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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

effects of each PBMI subscale score on remote assessment adherence and average performance on each task over 8 days. After adjusting for aging, we found a higher rate of false alarms (proportion of misidentified stimuli) on the WM task was associated with higher levels of both self-reported prospective control ($F(2, 86) = 4.188, p = .018$) and future control ($F(2, 96) = 5.003, p = .009$). Increased response time on the PS task was also associated with higher levels of future control when adjusted for aging ($F(2, 96) = 6.075, p = .003$). There was no main effect of memory self-efficacy ratings on EM. We found no main effects of memory self-efficacy ratings on assessment adherence.

Conclusions: These findings suggest perceptions of high prospective and future control are associated with positive response bias on a forced-choice WM task, and high perceptions of future control are also associated with slower response times on PS tasks. Future research should examine whether this is due to increased deliberation, cautiousness, or other factors. Limitations include the potentially limited generalizability of this largely White, highly educated, and motivated sample self-selected for AD research. Next steps for this research include comparing these results with the effects of perceived self-efficacy on in-person cognitive assessments.

Categories: Aging

Keyword 1: self-monitoring

Keyword 2: technology

Keyword 3: aging disorders

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29 Quick-Reference Criteria for Identifying Clinically Significant Multivariate Change in Older Adult Cognition: An ADNI Study

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Objective: Accurately interpreting change in cognitive functioning is an essential aspect of clinical care for older adults. Several approaches to identifying 'true' cognitive change in a single cognitive measure are available (e.g., reliable change methods, regression-based norms);

however, neuropsychologists in clinical settings often rely on simple score differences rather than advanced analytical procedures especially since they examine multiple test performances. This study sought to establish quick-reference normative criteria to help neuropsychologists identify how frequently significant change occurs across multiple cognitive measures in cognitively normal older adults.

Participants and Methods: Data were obtained from the Alzheimer's Disease Neuroimaging Initiative (ADNI). Participants were 401 older adults who were classified as cognitively normal at baseline and at 24-month follow-up. In ADNI, these clinical classifications are made separately from the assessment of cognitive performance, including cognitive change. The sample was 50.1% female, 93.5% non-Hispanic White, 4.0% non-Hispanic Black, 1.5% Asian American, and 1.0% other race/ethnicity, with a mean age of 76.0 years ($SD = 4.9$). Mean education was 16.4 years ($SD = 2.7$). The cognitive battery included: Boston Naming Test, Category Fluency Test, Trails A & B, Clock Drawing Test, and Auditory Verbal Learning Test, Trial 1-5 Total and Delayed Recall. Change scores between baseline performance and 24-month follow-up were calculated for each measure. The natural distribution of change scores was examined for each measure and cut points representing the 5th and 10th percentile were applied to each distribution to classify participants who exhibited substantial declines in performance on a given measure. We then examined the multivariate frequency of statistically rare change scores for each individual.

Results: As expected in a normal sample, overall cognitive performance was generally stable between baseline and 24-month follow-up. Across cognitive measures, 43.6% of participants had at least one change score fall below the 10th percentile in the distribution of change scores, and 21.9% had at least one score below the 5th percentile. 13.0% of participants had two or more change scores that fell below the 10th percentile, in comparison to 4.5% with two or more below the 5th percentile. 3.2% of participants had three or more change scores below the 10th percentile, versus 0.5% of participants who had three change scores below the 5th percentile.

Conclusions: Among cognitively normal older adults assessed twice at a 24-month interval with a battery of seven measures, it was not uncommon for an individual to have at least one score fall below the 10th percentile (43% of the