

tasks and on all measures from the Lunch task, for which the steps and objects may have been less familiar to ESL participants. Thus, performance-based testing holds promise for informing neuropsychological assessment of ESL older adults, but care should be taken in selecting test items that are highly familiar and outcome measures that are most meaningful across a range of cultures.

Categories: Aging

Keyword 1: cross-cultural issues

Keyword 2: aging disorders

Keyword 3: diversity

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51 Longitudinal Performance on the NIH Toolbox Cognition Module in a Cognitive Aging Sample

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Objective: As the older adult population increases in the coming decades, the number of persons that develop dementia of the Alzheimer's type (DAT) will increase accordingly. Though curative treatment for Alzheimer's disease remains elusive, early detection of cognitive decline allows for initiation of pharmacological treatment to slow disease progression and non-pharmacological approaches to support quality of life and well-being of affected individuals and their care partners. Streamlined approaches that bridge the gap between brief screenings and comprehensive neuropsychological evaluation are needed. The NIH Toolbox Cognition Battery (NIHTB-CB) is a brief, easily administered, computerized cognitive battery that assesses various aspects of both fluid and crystallized cognitive abilities. ARMADA (Advancing Reliable Measurement in Alzheimer's Disease and Cognitive Aging) is a multi-site study that aims to validate the NIHTB across the spectrum from normal aging to DAT. The current study utilized longitudinal data from ARMADA to determine whether performance on the NIHTB-CB detects cognitive decline in persons with normal cognition (NC), mild cognitive impairment (MCI),

and mild DAT over the span of two years. We predicted that scores would decline for the MCI and DAT groups, but not for the NC group.

Participants and Methods: Participants were 191 participants drawn from the larger ARMADA cohort aged 65-84 ($n_{NC} = 118$, $n_{MCI} = 47$, $n_{DAT} = 26$) that completed the NIHTB-CB at baseline and 12 months. The clinical groups were significantly older than the NC group at baseline ($M_{NC} = 72.72$, $M_{MCI} = 76.63$, $M_{DAT} = 75.42$; $p < .001$) and the NC and MCI groups had significantly more years of education than the DAT group ($M_{NC} = 17.03$, $M_{MCI} = 16.83$, $M_{DAT} = 15.54$; $p = .008$).

Results: Mixed model ANOVAs determined differences in uncorrected NIHTB-CB scores between clinical groups at baseline and 12 months, controlling for age and education. There were significant interactions between time and clinical group for Flanker ($p < .001$), Pattern Comparison ($p < .001$), and Picture Vocabulary ($p = .001$), such that the DAT group demonstrated a more negative slope of change than the NC and MCI groups. For Oral Reading, the MCI group demonstrated a more negative slope of change than the NC and DAT groups ($p = .01$).

Conclusions: Differential score trajectories were found for the Flanker task, with a more negative pattern of change in scores in the DAT group compared to the NC and MCI groups. Contrary to expectation, scores decreased for the two crystallized subtests across groups, which may reflect regression to the mean given high baseline scores, especially for Picture Vocabulary; however, these results were also moderated by group with less decline in scores in the NC group, which may indicate involvement of non-crystallized abilities in executing a single word comprehension task. Group differences were subtle, which may in part reflect the relatively short period of follow up. The Flanker task appears to be most sensitive to decline in mild DAT compared to MCI and NC. Results provide preliminary support for the utility of NIHTB-CB in detecting cognitive decline along the cognitive aging to DAT spectrum.

Categories: Aging

Keyword 1: cognitive functioning

Keyword 2: dementia - Alzheimer's disease

Keyword 3: mild cognitive impairment

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52 Association Between COVID-19 Coping Strategies and Cognitive Function in Older Adults

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Objective: Cognitive function may underlie the use of more adaptive as compared to maladaptive coping strategies to manage pandemic-related stress in older adults. As the composition of coping strategies varies with context, we investigated the factor structure of 14 established coping strategies. We then aimed to determine whether specific coping strategies were associated with cognitive function.

Participants and Methods: 141 adults aged 50-90 years old completed the study via Zoom. The National Alzheimer's Coordinating Center T-Cog battery assessed cognitive function. The Brief Cope, adapted to evaluate COVID-19, measured 14 specific coping strategies.

Results: Based on our factor analyses, Avoidant (e.g., denial and substance use) and Approach (e.g., planning, instrumental and emotional support systems) coping composite scores were formed. Regression analyses, adjusted for age and education, indicated that 12.9% of the variance in the use of Avoidance coping strategies was explained by worse performance on measures of episodic memory, executive attention/processing speed, working memory, and verbal fluency. A closer examination indicated that verbal fluency was not a statistically significant contributor to the model. 9.1% of the variance in Approach coping strategies was related to cognitive function with working memory and verbal fluency being statistically significant contributors to the model.

Conclusions: Older adults with better performance on higher-order cognitive testing may utilize more effective coping strategies in older adults. These results have implications for attenuating pandemic-related stress and warrant developing brief interventions to help facilitate problem-solving and reduce emotional distress in those with lower cognitive resources.

Categories: Aging

Keyword 1: cognitive functioning

Keyword 2: executive functions

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53 2-Back Performance Does Not Differ Between Cognitive Training Groups in Older Adults Without Dementia

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Objective: Cognitive training is a non-pharmacological intervention aimed at improving cognitive function across a single or multiple domains. Although the underlying mechanisms of cognitive training and transfer effects are not well-characterized, cognitive training has been thought to facilitate neural plasticity to enhance cognitive performance. Indeed, the Scaffolding Theory of Aging and Cognition (STAC) proposes that cognitive training may enhance the ability to engage in compensatory scaffolding to meet task demands and maintain cognitive performance. We therefore evaluated the effects of cognitive training on working memory performance in older adults without dementia. This study will help begin to elucidate non-pharmacological intervention effects on compensatory scaffolding in older adults.

Participants and Methods: 48 participants were recruited for a Phase III randomized clinical trial (Augmenting Cognitive Training in Older Adults [ACT]; NIH R01AG054077) conducted at the University of Florida and University of Arizona. Participants across sites were randomly assigned to complete cognitive training (n=25) or an education training control condition (n=23). Cognitive training and the education training control condition were each completed during 60 sessions over 12 weeks for 40 hours total. The education training control condition involved viewing educational videos