

Conclusions: Higher level of healthy literacy was associated with older age and higher level of education. However, no significant association was found between health literacy and mental health measures of happiness, well-being, depression, and anxiety in cognitively healthy individuals, even after controlling for demographics. The lack of such associations in this study was unexpected and suggests that other factors such as the presence of health conditions (e.g., diabetes, cancer) might critically contribute to such associations. Future studies should examine these associations in a larger context to better understand how to promote healthy self-care behaviors.

Categories: Aging

Keyword 1: aging (normal)

Keyword 2: everyday functioning

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50 Examining the Utility of a Performance-Based Test of Everyday Function for Assessing Cognition in Older Adults Who Speak English as a Second Language

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Objective: Accurate early detection of subtle cognitive difficulties is critical for optimizing treatment of neurodegenerative disease. Those who speak English as a second language (ESL) in the US may be at a disadvantage on English-written neuropsychological tests, increasing the potential for error, particularly when cognitive difficulties are mild and/or when informants are not available/unreliable. This study examined the utility of a standardized, performance-based test of everyday function for the assessment of cognition in ESL older adults.

Participants and Methods: Five ESL participants (Mage=83 years; range 65-84 years old) were recruited along with 43 cognitively healthy, native English speakers (controls) as part of a larger study of functional assessment in community-dwelling older adults. Participants

were required to identify a study partner to answer questions about their cognitive abilities and everyday functioning. ESL participants reported diverse native languages: Cantonese, Mandarin, Gujarati/Hindi, Farsi, and Azeri. One of the 5 ESL participants reported a diagnosis of MCI. Participants completed the Mini-Mental Status Exam, Trail Making Tests, Digit Span, Boston Naming Test, Hopkins Verbal Learning Test, and Brief Visual Memory Test, resulting in 15 test scores. Participants also completed the Naturalistic Action Test (NAT), a performance-based tests that requires preparation of a breakfast and lunch using standardized objects presented on a table. Recordings of NAT performance were scored by two coders for time to completion, accomplishment of task steps, and errors (overt, micro-error, motor), resulting in 10 scores for the Breakfast and the Lunch tasks. Any discrepancies amongst the two coders were resolved by our lab. Informant-report questionnaires included the Functional Assessment Questionnaire (FAQ), Everyday Cognition Questionnaire (ECog) and IADL-C. Total scores from the cognitive tests, NAT, and informant reports for each ESL participant were compared against the scores of Controls by computing T-scores using the Control M and SD. Low/impaired test scores were defined as <1.5 SD.

Results: Informants reported intact everyday function (FAQ, IADL-C) for all ESL participants. Informant-reported ECog scores varied as expected; with mild decline reported for the participant with MCI. On traditional cognitive tests, ESL participants showed variable performance, such that low scores were obtained on up to 9 of the 15 scores. The ESL participant with MCI obtained low scores on 11/15 scores. On the NAT, all of the ESL participants without MCI showed scores on the Breakfast (accomplishment, errors) that were comparable to Controls. Completion time for both Breakfast and Lunch and Lunch scores (accomplishment, errors) were variable, with low across observed in ESL participants with healthy cognition.

Conclusions: Older participants with ESL and healthy cognition showed highly variable scores on traditional, neuropsychological tests. However, on one item from a performance-based assessment of everyday function (NAT Breakfast), ESL participants with healthy cognition consistently performed well compared to healthy Controls. Performance was less consistent for completion time across both NAT

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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