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Objective: Medical providers often express difficulty in detecting dementia (Bradford et al., 2009), feel ill-equipped to address issues related to dementia care, or neglect to communicate dementia diagnoses and treatment recommendations (Alzheimer's Association, 2015). Despite this, neuropsychologists, who are specifically trained in dementia diagnosis and treatment planning, are not always utilized in the dementia care process. The objective of this study was to investigate family members' perceptions regarding the incremental benefit of the neuropsychological evaluation, relative to previously rendered services, in addressing patient diagnosis/symptoms and in discussing future care plans.
Participants and Methods: A survey questionnaire was distributed to family members of patients who had undergone a neuropsychological dementia workup at a university medical center in the Midwest by one of five neuropsychology providers. Immediately following the neuropsychological feedback session, family members were provided a $10 gift card and a stamped, pre-addressed envelope to return the survey anonymously by mail. Respondents were typically spouses (60.6%) or adult children (29.1%), with 82.4% identifying themselves as the primary caregiver. Patient age ranged from 52 to 92 years (M=73.4). Sixty-seven percent of patients were diagnosed with dementia and 24% with mild cognitive impairment; 9% were not diagnosed with a cognitive disorder. The most commonly suspected etiology for cognitive impairment was Alzheimer's disease or mixed Alzheimer's and vascular disease (46%). Providers noted as previously having been involved in the care of the patients' cognitive symptoms included primary care providers (88%), neurologists (60%), psychiatrists (13%), and psychologists (9%).
Results: Two-hundred surveys were disseminated with a response rate of 64% (n=127). Family members were asked to compare the benefit of the neuropsychological evaluation in addressing the patients' symptoms as compared with services rendered by previous providers using a Likert scale ranging from 1 (not beneficial) to 5 (extremely beneficial). The average benefit rating was 4.6/5.0 (SD=0.7) for the neuropsychological evaluation as compared with 3.0/5.0 (SD=1.1) for previous services, a statistically significant difference ($p < .001$). Family members were also asked to rate the helpfulness of both the neuropsychologist and previous providers in discussing aspects of the patient's diagnosis and care plan using a Likert scale ranging from 1 (not helpful) to 5 (extremely helpful). Comparison using Wilcoxon signed-rank tests indicated neuropsychologists were rated as significantly more helpful than previous providers ($p < .001$) in discussing the cause or diagnosis for their family member's symptoms (M=4.6/5.0 vs. M=3.0/5.0), strategies for providing care to their family members (M=4.5/5.0 vs. M=2.8/5.0), a comprehensive treatment and care plan (M=4.3/5.0 vs. M=2.6/5.0), symptom impact on activities of daily living (M=4.4/5.0 vs. M=2.9/5.0), and symptom impact on current and future functioning (M=4.4/5.0 vs. M=2.8/5.0).
Conclusions: Overall, family members reported the neuropsychological evaluation and feedback session to be significantly more helpful in addressing patient cognitive diagnoses, symptoms, and care plan as compared to previously rendered services by non-neuropsychologists. The results underscore the unique and incremental benefit of the neuropsychological evaluation, not only in diagnosis, but also in assisting family in understanding symptom nature, functional impact, and resultant care needs.

Categories: Dementia (Alzheimer's Disease)
Keyword 1: neuropsychological assessment
Keyword 2: dementia - Alzheimer's disease
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47 Amyloid/Tau Ratio and Early Predictors of Alzheimer's Disease

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Objective: Early cognitive signs of Alzheimer's disease are often subtle and go unnoticed until they become more prominent and debilitating. Thus, symptoms begin long before an actual

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Alzheimer's diagnosis is given. However, it is known that cognitively healthy older individuals with lower amyloid/tau ratios (PAT) are more likely to develop Alzheimer's disease than those with higher amyloid/tau ratios (NAT). Therefore, we explored whether this ratio can be used in conjunction with neuropsychological tests to isolate cognitive predictors of Alzheimer's disease amongst cognitively healthy older adults. We were interested in potential group differences on the California Verbal Learning Test, Second Edition (CVLT-II) Long Delay Free Recall scores and Cued Recall scores. We hypothesized that: (a) individuals in the PAT group would have weaker CVLT-II Long Delay Free Recall scores than individuals in the NAT group; and (b) individuals in the PAT group would recall fewer words on the CVLT-II Long Delay Cued Recall trial than individuals in the NAT group.
Participants and Methods: There were 115 older individuals recruited via Huntington Medical Research Institutes and the University of Southern California who had their cerebral spinal fluid extracted to measure amyloid/tau ratios. They completed the California Verbal Learning Test-II as part of a larger neuropsychological battery and were determined to be cognitively healthy. The mean age of these participants was 74.5 years (*SD* = 8.3), and there were 36 who met the threshold for the amyloid/tau ratio associated with Alzheimer's disease (PAT) while the other 79 did not (NAT). A hierarchical linear regression tested the hypotheses, with two blocks used for the analyses. Block 1 for both analyses contained variables to control for the potential effects of various factors in performance on the Long Delay tasks. Block 2 consisted of the amyloid groups (NAT vs. PAT).
Results: After controlling for age, sex, education, body mass index, Montreal Cognitive Assessment scores, and depression, we found no significant difference between CVLT-II Long Delay Free Recall scores or Long Delay Cued Recall scores for the two groups.
Conclusions: While no significant difference was found on the long delay trials of the CVLT-II, it is important to note that it is unclear at what stage Alzheimer's related decline begins or can be detected using cognitive testing. Longitudinal studies would help to better understand if this lack of association holds true over time. Other aspects of the CVLT-II, such as intrusions and repetitions, would also help to better understand the different ways that symptoms of Alzheimer's disease can manifest early on.

Categories: Dementia (Alzheimer's Disease)
Keyword 1: aging disorders
Keyword 2: dementia - Alzheimer's disease
Keyword 3: assessment
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48 Psychometric properties of DCTclock™ with commonly used neuropsychological tests and their combined ability to predict Beta-Amyloid Positron Emission Tomography Status

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Objective: Sensitive and non-invasive methods of screening for early-stage Alzheimer's disease (AD) are urgently needed. The digital clock drawing test (DCTclock™) is an established and well-researched neuropsychological tool that can aid in early detection of dementia. Other simple, yet sensitive, neuropsychological measures able to detect early stages of AD include Trail Making Tests (TMT). We investigated the psychometric properties of DCTclock™ with TMT-A and TMT-B. We then sought to understand the degree to which neuropsychological tools (i.e., DCTclock™, TMT-A, and B) versus the Montreal Cognitive Assessment (MoCA) predict beta-amyloid (Aβ) positron emission tomography (PET) status (positive or negative) in cognitively normal individuals.
Participants and Methods: Participants included a sample of cognitively normal older adults (n= 59, M age = 69.2, F = 64%) recruited from the Butler Memory and Aging Program. The Linus Health DCTclock™ uses a digital pen to capture traditional clock drawing test performance and advanced analytics to evaluate the drawing process for indicators of cognitive difficulty. DCTclock™ may have overlapping cognitive properties with TMT measures, like

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