statistical analysis, LMII was positive in converters with the cutoff value 6 or less at their first examination, by 100% sensitivity, 66.7% specificity, 63.6% positive predictive value, and 100% negative predictive value. **Conclusions:** So far there was no report about clear cutoff value for the converter, our data indicated that the cutoff value 6 or less in LMII of WMS-R is a highly sensitive and useful tool at the first visit in memory clinic, and for a decision of an early intervention to the patients.

P3-112 EVERYDAY MEMORY IN HEALTHY AGING AND MILD COGNITIVE IMPAIRMENT

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Background: Mild cognitive impairment (MCI) is often considered a precursor to Alzheimer's disease (AD). Associative episodic memory tasks are particularly sensitive to preclinical AD, however they often lack ecological validity, which is important when evaluating performance in daily activities. We describe the development of two everyday associative episodic memory tasks: a face-name test and a car-numberplate task, and their utility in separating MCI from healthy older adults compared to standard episodic memory tasks. **Methods:** Participants were 33 healthy controls (HC, age: 60-89) recruited from the community and 21 MCI participants (age: 62-87) recruited from memory clinics. Reported results are from participants' baseline assessments as part of a memory intervention program. Standard episodic memory tasks included: Hopkins Verbal Learning Test - Revised, California Verbal Learning Test - Second Edition, Logical Memory, and Rey Complex Figure Test. The face-name test consisted of 12 face-name pairs, which participants had five minutes to learn, followed by immediate free recall and delayed recall after 20 minutes. In the car-numberplate task participants were asked to remember the numberplates (3 letters, 3 numbers) associated with 3 cars. They were given two minutes to study all numberplates, followed by immediate recall and delayed recall after 20 minutes. **Results:** Participants with MCI performed significantly worse than HC on the standard episodic memory tasks (d ranging from 0.83 to 2.78). MCI participants performed significantly worse than HC on immediate, $t(46.4) = 4.54$, $p < .01$, $d = 1.24$, and delayed, $t(44.8) = 5.48$, $p < .01$ $d = 1.52$, recall for the face-name task, and immediate, t $(49.3) = 3.31$, $p < .01$, $d = 0.90$, and delayed recall, $t(54) = 5.33$, $p < .01$, $d = 2.04$, of the car-numberplate task, with similar effect sizes to the standard tasks. **Conclusions:** The everyday tasks separated MCI from HC participants as effectively as standard episodic memory tasks and were well-tolerated. These tasks can provide a valuable addition with enhanced ecological validity for measuring the effect of interventions and profiling everyday memory performance in HC and MCI.

P3-113 ADAS-COG CENTRAL MONITORING AND INTERVENTION WITH RATERS: A CRITICAL EXTENSION AND INTEGRAL COMPONENT OF ALZHEIMER TRIALS RATER TRAINING PROGRAMS

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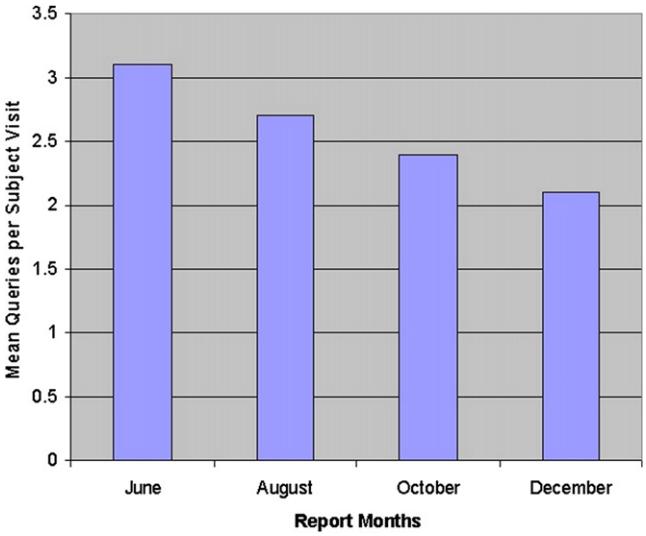
Background: Though early ADAS-Cog publications demonstrate validity, reliability, and sensitivity to change, maintaining those psychometric qualities is difficult in multi-center clinical trials. The ADAS-Cog is ubiquitously used, and until there are better measures the challenge is to find effective methods to reduce rater variance while maintaining ADAS-Cog data quality. Rater pre-qualification, training, and certification are well established components of comprehensive rater training programs. Central expert review of study subject ratings during a clinical trial reveals errors that can be addressed with additional training as they are detected to prevent further errors. Safety and subject selection issues can also be identified in a timely way. **Methods:** Raters in 2 ongoing Alzheimer's clinical trials (NCT00810147 & NCT00890890) were pre-qualified based on education and experience, trained and certified on the ADAS-Cog. Score sheets for the cognitive scales were faxed in for expert central review as completed, queries documented and additional training was provided to problematic raters. **Results:** Total queries for all scales in Study 1: 1249 (663 scoring); 1 inclusion criteria violation; Study 2 (started 4 months later): 380 queries (164 scoring); 4 inclusion criteria violations. In a sample of 260 ADAS-Cog queries, 68% were scoring errors; Word Recognition, Orientation, and Constructional Praxis contributed 71% of the total ADAS-Cog queries. As centrally monitored raters received feedback/re-training, the mean number of cognitive scale queries per subject visit decreased 32% (from 3.1 per subject visit to 2.1) over 6 months in Study 1. **Conclusions:** Expert central monitoring of study subject ADAS-Cog data reveals errors and can reduce noise and risk in AD clinical trials in a number of ways. By centrally monitoring ratings during the study, raters making errors may be remediated, reducing the average number of errors per visit going forward. Central monitoring also identifies other issues such as safety issues when abrupt decreases in cognitive function are observed and identifies inclusion criteria violations.



P3-114 THE ASSOCIATION OF EXECUTIVE FUNCTION WITH LIMITATIONS IN INSTRUMENTAL ACTIVITIES OF DAILY LIVING AMONG OLDER ADULTS IN THE UNITED STATES: THE AGING, DEMOGRAPHICS, AND MEMORY STUDY

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Background: We estimated the frequency of impaired performance on measures of executive function among older adults, and we examined the association between impaired performance on these measures and limitations in instrumental activities of daily living (IADLs) among older adults with and without dementia using a nationally representative sample in the United States. **Methods:** We used data from the Aging, Demographics, and Memory Study (ADAMS), a sub-study of the Health and Retirement Study (HRS) focused on cognitive impairment. We defined impaired performance on executive function tests as at least 1.5 SDs below age, gender, and education-adjusted means based on published norms for the Animal Fluency Test or Trail Making Tests A and B (mild/moderate, -1.5～-2.4 SD; severe, -2.5 SD or less). Cognitive category (normal cognition, cognitive impairment without dementia (CIND), dementia) was assigned in the ADAMS by an

expert consensus panel. IADL limitations were obtained from interviews with informants for the participant. **Results:** Among individuals with dementia, a large number of participants did not complete the tests due to cognitive impairment or other reasons (e.g., 18.3% for Animal Fluency Test, 50.2% for Trail Making Test A, 77.6% for Trail Making Test B). Among those completing the test, significantly higher proportion of those with CIND and dementia had abnormal scores compared to those with normal cognition for each test ($p < 0.001$ for all tests). 18.4% of those with normal cognition, 57.0% of those with CIND and 89.1% of those with dementia had abnormal scores for at least one test. Among those with normal cognition or CIND, worse test scores were associated with a greater number of limitations in IADLs ($p < 0.01$ for all tests). **Conclusions:** Impairment on executive function measures may be common even among individuals without dementia, and it may be associated with IADL limitations. Assessing executive function for those without dementia may help to identify individuals with greater needs for daily support.

P3-115 COGNITIVE ACTIVITY AND DECLINE IN ALZHEIMER'S DISEASE: THE CACHE COUNTY STUDY

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Background: There is variability in rates of decline in Alzheimer's disease (AD) and little is known about factors that influence dementia progression. Limited research has suggested that cognitive reserve is associated with differences in trajectories of decline, although these studies have focused on forms of reserve that exert their effects early in the lifespan (e.g., education level, occupational attainment). The effect of late life mental stimulation on decline in AD has rarely been studied. We examined the association of ongoing participation in cognitive leisure activities on rates of cognitive and functional decline over a mean of 2.7 years in a sample of persons with incident AD. **Methods:** Frequency of engagement in leisure pursuits was assessed at the initial visit, and activities were classified based on level of information processing involved. The number of activities requiring novel information processing was calculated for each individual, with the requirement of at least weekly participation. Cognitive ability was assessed using the Mini-Mental State Examination (MMSE), while the Clinical Dementia Rating (CDR; sum score) was used to measure functional ability. We employed mixed effects models to examine the effect of mentally stimulating activities on rates of cognitive and functional deterioration. **Results:** At the initial visit, 64.7% of the sample was female, with mean (sd) age of onset of 82.4 (6.0), AD duration of 4.0 (2.0) years, MMSE of 19.4 (7.2), and CDR of 1.4 (0.9). 87.2% of participants reported engaging in more than one stimulating activity. Results indicated a differential effect for cognitive activity on decline in MMSE performance depending upon initial dementia severity. A higher number of cognitive leisure activities was associated with slower decline in mild AD ($CDR <= 1$; $p = 0.02$), but effects were no longer evident in more severe dementia. Greater cognitive activity was associated with better functional performance across visits, particularly early in the disease course ($p = 0.006$). No effect was observed for age, gender, education, APOE genotype, or physical activity. **Conclusions:** Ongoing engagement in mentally stimulating leisure pursuits may slow decline in early AD. Results suggest that cognitive reserve may be malleable into late life and may inform the development of more effective rehabilitative therapies.

P3-116 THE CLOCK DRAWING TEST: A COMPARISON BETWEEN COPY AND FREE HAND DRAWING

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Background: The Clock Drawing Test (CDT) has been extensively studied as a brief screening tool for Alzheimer's disease (AD). There are many studies concerning the different scoring methods of the CDT, but few studies have been published comparing different approaches, *i.e.*, copy or free hand drawing. This study aimed to compare the correlation with Mini Mental State Examination (MMSE) and the accuracy for detecting AD of the two forms of the CDT (copy or free hand drawing) in a sample of healthy elderly and Alzheimer's disease (AD) patient. **Methods:** Copy CDT, free hand drawing CDT, and the Mini Mental State Examination (MMSE) were subsequently applied in 32 patients who met DSM-IV and NINCDS/ADRDA criteria for AD, and 43 healthy controls, age $\geq$60 years, from Hospital de Clínicas de Porto Alegre, Brazil. Different blinded investigators carried out the scoring on both forms of the CDT test using the same scoring method (0-5 scoring from the AD Cooperative Group). We used Pearson correlation analysis to measure the degree of linear dependence between each form of CDT and MMSE, age and educational level. The diagnostic accuracy was evaluated with the Receiver Operating Characteristic (ROC) analysis. **Results:** Age and educational level in the total sample were 72.68 ± 7.6 and 6 ± 4 (mean $\pm$ SD). Both CDT forms (copy or free hand drawing) showed significant coefficient correlations with MMSE ($p = 0.01$), ($r = 0.70$, $r = 0.69$, respectively). Educational level was not correlated with either CDT forms. There was an equal weak negative significant correlation between age and both CDT forms ($r = -0.43$, $p = 0.01$). The area under the ROC curve was 0.813 for free drawing version and 0.814 for copy version. Coordinates of the curves presented sensitivity of 94% and specificity of 65% for free draw CDT and sensitivity of 78% and specificity of 72% the copy CDT with the cutoff 2. **Conclusions:** Utilizing the CDT as a brief screening tool for AD, the free hand drawing showed more sensitivity than the copy drawing approach with the cutoff 2. The CDT also showed strong correlation with MMSE.

P3-117 THE NEUROCOGNITIVE PROFILE OF PATIENTS WITH MAJOR DEPRESSION WITH AND WITHOUT CARDIOVASCULAR RISK FACTORS COMPARED TO MILD DEMENTIA PATIENTS

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Background: Computerized neurocognitive testing can be useful in separating age-matched controls from those with early dementia. Specifically, tests of verbal and visual memory, the Continuous Performance Test, the Stroop Test, and the Perception of Emotions Test have been shown to separate these 2 diagnostic groups, and indeed, poor performance on these tests may represent a dementia profile or factor (DEMFAC). Major depression may be a risk factor for the development of dementia. The mechanism may be related to vasculopathy. We hypothesized that patients with major depression and cardiovascular risk factors (diabetes, hypertension, hyperlipidemia, or obesity) would do significantly worse on the tests of DEMFAC than major depression patients without cardiovascular risk factors. Further, we tested the notion that major depression patients with cardiovascular risk factors would score similarly to mild dementia patients on DEMFAC. **Methods:** This was a cross-sectional study with 71 patients with major depression and cardiovascular risk factors (MDDCV) and 931 with major depression without cardiovascular risk factors (MDD). We also compared the MDDCV patients with a cohort of 71 mild dementia patients (MMSE score 19-24). **Results:** Controlling for gender, age, race, and computer familiarity, patients with MDDCV were significantly worse on all the tests that compose DEMFAC ($p < 0.02$ in each case, and with partial eta square values of .013, .025, .054, .060, and 0.082, suggesting mostly medium effect sizes). There were not significantly different scores ($p > .05$) on any of the DEMFAC tests when MDDCV patients were compared with the dementia cohort. **Conclusions:** Cardiovascular risk factors may at least partially mediate the putative association between major depression and dementia. Here, we provide evidence that patients with major depression and cardiovascular risk factors perform poorly on neurocognitive tests sensitive and specific for dementia, much more so than