

acquired co-registered PD-weighted, T2-weighted and DT-images (5 repetitions with  $b=0$ , and 25 diffusion sensitizing directions with  $b=1000$  sec/mm<sup>2</sup>). The diffusion tensor and its eigensystem were calculated using DTI-Studio ver. 2.40 (by H. Jiang and S. Mori). With the aid of color-coded FA maps, multislice ROIs from the genu corpus callosum (gcc) were manually delineated (MIPAV ver. 1.60, CIT/NIH) to obtain gcc-specific statistics of FA in each subject. Here we present results from the first 60 participants, mean age 57.5 yrs (SD 7.6), 70 % women. **Conclusions:** The mean PASAT score was 39.8 (SD 13.4) and mean FA\_mean 0.71 (SD 0.03). We found a slight negative correlation between FA\_mean and PASAT ( $r = -.267$ ,  $p=0.039$ ), i.e. the lower the mean FA in the gcc, the higher the performance on PASAT. By conventional interpretation of FA as a measure of connectivity and white matter integrity, this result indicates that performance on PASAT is not critically dependent on information transfer in the anterior part of corpus callosum. One may rather speculate if high performance on PASAT is associated with high degree of lateralized processing in older adults. We will include more fiber bundles and neuropsychological test results in the complete sample to further investigate this finding.

P3-027

#### THE IMPACT OF NEUROPSYCHOLOGICAL NORMS AND CUTOFF POINTS ON AMNESTIC AND MULTIDOMAIN SUBTYPE CLASSIFICATION IN COGNITIVE-IMPAIRMENT-NO-DEMENTIA (CIND)

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**Background:** A distinction has been proposed in studies of mild cognitive impairment between multi- and single-domain subtypes. Different psychometric algorithms have been utilized to classify these subtypes. The impact of changing algorithms on subtype classification is not known. **Objective:** To assess the effect of cutoff points and norms on the classification of Cognitively-Impaired-Not-Demented (CIND) individuals into Amnesic-Only and Multidomain subtypes. **Methods:** This study included 27 CIND and 26 age- and education-matched control subjects. CIND criteria included fulfillment of at least one but not all DSM-IV-TR diagnostic items for dementia, a CDR global stage score of 0.5, an MMSE  $\geq 24$ , and a Rey Auditory Verbal Learning test (RAVLT) delayed recall score  $\geq 1SD$  below norms. Control subjects had no history of memory or cognitive complaints, and an MMSE and RAVLT delayed recall score  $< 1SD$  below norms. A neuropsychological battery, given to all subjects, included multiple measures of memory, verbal abilities, visuo-construction and attention. CIND subjects were further classified into subtypes on the basis of their test scores. Amnesic-Only was assigned when  $>30\%$  of memory tests were impaired, Multidomain, when additionally, at least one non-memory domain was impaired on  $>30\%$  of tests, Minimal-Impairment when  $\leq 30\%$  of tests were impaired in any domain. We investigated three different cutoffs for impairment:  $\geq -1SD$ ,  $\geq -1.5SD$  and  $\geq -2SD$  (relative to controls). We also compared published test norms and control scores ( $\geq -1SD$  cutoff). The effect of cutoffs and norm sets on classification was assessed by means of marginal homogeneity tests. **Results:** When applying a  $\geq -1SD$  cutoff, 74% of CIND were classified as Multidomain, 19% as Amnesic-Only, and 7% as Minimal-Impairment. At  $\geq -1.5SD$  and  $\geq -2SD$  the classification changed significantly, with 44 and 41% Multidomain, 30 and 22% Amnesic-Only, and 26 and 37% as Minimal-Impairment, respectively. When published norms were used instead of control scores, the classification also changed significantly, with 37% Multidomain, 48% Amnesic-Only, and 15% Minimal-Impairment. **Conclusions:** The selection of neuropsychological cutoff points and norms impacts subtype classification. Until consensus operational definitions are developed and validated against a clinical standard, the reliability of subtype distinctions in mild cognitive impairment will remain uncertain.

P3-028

#### SEVEN-MINUTE NEUROCOGNITIVE TEST BATTERY: A RELIABLE TEST FOR DEMENTIA

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**Background:** The increasing prevalence of Alzheimer's disease (AD) suggests that there is an increasing need for accurate and easily administered screening instruments to assess cognitive function. **Objective(s):** To examine the reliability of the 7-minute screen as a cognitive screening instrument for AD in a Sri Lankan population. **Methods:** 53 patients with mild-moderate AD, 34 with other dementias, 36 with mild cognitive impairment (MCI) referred to a memory clinic, and 60 patients with depression with no evidence of dementia and 56 healthy volunteers (controls) were recruited to the study after informed consent. All were community-dwelling and aged  $\geq 60$  years. Patients with severe dementia, receptive aphasia, visual and motor impairment, and severe depression were excluded. All diagnoses were made according to established criteria and the diagnosis of depression was confirmed after psychiatric evaluation. All subjects underwent cognitive assessment with the Mini Mental State Examination (MMSE) and the 7-minute screen. This screen consists of four components (enhanced cued recall, temporal orientation, verbal fluency, and clock drawing) that assess memory, orientation to time, fluency of expression, and executive function, cognitive functions typically compromised in AD. **Results:** Baseline characteristics did not differ significantly in the five groups.

Group	No. of Subjects	% Correctly Identified*	
		MMSE	7-minute
AD	53	81	100
MCI	36	00	42
Other dementias	34	59	88
Normal (controls)	54	73	95
Depression	60	27	57

\*Correct identification for AD, MCI, other dementias: test (+); correct identification for normal, depression: test (-)

**Conclusions:** The 7-minute neurocognitive screen is a highly sensitive instrument to screen for AD and was more reliable than the MMSE to detect AD, MCI, and other dementias in this Sri Lankan population. However, the accuracy of the screen may be confounded by the presence of depression.

P3-029

#### PATTERN OF COGNITIVE IMPAIRMENT IN AD IS MODIFIED BY APOE GENOTYPE

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**Background:** The Apolipoprotein E (APOE) gene is known to influence susceptibility to development of AD. It is conceivable that the APOE-gene also modifies clinical presentation. **Objective:** We examined if clinical phenotype of AD in terms of pattern of cognitive impairment differs according to APOE genotype. **Methods:** Cognitive functions of 198 consecutive AD patients were assessed using the Visual Association Test part A (VAT-A) and Memory Impairment Screening test+ (MIS+) for memory, VAT picture naming for language, fluency test and Trail Making Test (TMT) for executive functions (fluency and TMT-B) and mental speed (TMT-A). Dementia severity was assessed using the MMSE. APOE genotype was determined. Analysis of variance (ANOVA) was used with age, sex, education and MMSE as covariates. **Results:** There were 58 (29%) APOE e4 negative patients, 114 (58%) heterozygous patients and 26 (13%) homozygous patients. There was no association between APOE status and sex, age, level of education or MMSE. There was a significant association between APOE genotype and VAT-A-score ( $p = 0.039$ ), MIS+delayed recall score ( $p = 0.006$ ), and fluency-score ( $p = 0.043$ ),