

loss should reveal limbic system dysfunction and loss of valence association to cognitive information. **Methods:** To counterpart the miss of test sensitivity and to bring to light this early symptom, we proposed: (1) to evaluate separately inhibition and then inhibition-emotion efficiencies in comparing 10 early AD (MMSE = 21-26, mean age = 80), 10 old (mean age = 79) and 10 young adults (mean age = 23) on Standard and Emotional Stroop (emotion perception), (2) to control the incidence of individual efficiency on cognition, using the NEPSY neuropsychological test (Korkman et al., 1998), on emotion with the Multiple Emotional Intelligence Scale (Mayer & Salovey, 1997) on depression-apathy and socio-educational level. If affect loss severely diminishes somatic marking of cognitive information, AD capacity of inhibition will not be affected by emotional valence associated to information. **Results:** The initial results indicate a relative increase of errors number between Standard et Emotional Stroop from AD patients to young adults but no reaction time differences. Conversely, emotional sensibility differs between young adults and AD patients, depending on emotion perception, understanding and regulation. Executive functions vary at intergroup and intragroup levels. Individual results are, actually, explored in function of these three indicators and will be presented, as influence of positive and negative valence. **Conclusions:** More generally, if AD cognitive-emotional damage can be easily demonstrated, the degree of validity of early diagnostic of AD will increase, treatments will begin earlier and capacity to report enter in severe phase of AD will increase, too. This progress could benefit to patients, caregivers and Public Health.

P4-067

#### DIFFERENCES OF NEUROPSYCHOLOGICAL FUNCTION AND BEHAVIORAL SYMPTOMS BETWEEN DEPRESSIVE ELDERLY PATIENTS WITH OR WITHOUT SUBJECTIVE MEMORY COMPLAINT

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**Background:** To determine whether subjective memory complaint(SMC) in depression is related to the impairment of daily activities and to certain areas of cognitive function in elderly patients with depression. **Methods:** 20 depressive elderly patients without SMC, 16 depressive elderly patients with SMC who visited cheju national university hospital from June, 2007 to January 2008 were assigned for the study. CERAD-K, MMSE-KC, BDS-ADL, K-GDS were used to check cognitive function and activity of daily living, and depression. the two groups were compared using chi-square test and independent t-test. **Results:** BDS-ADL(Blessed Dementia Scale-Activities of Daily Living) [0.33(SD = 0.34) vs 0.75(SD = 0.71)] scores were statistically different between the two groups. SBT-K (Korean version of Short Blessed Test), Verbal fluency, Word list memory, Word list recall, CDR (Clinical Dementia Rating Scale), Naming, MMSE-KC, Constructional praxis, Word list recognition, Constructional praxis recall, Subjective Memory Complaint(SMC) were not different between the two groups. BDS-ADL was also found to be a correlate of subjective memory complaint among depressed elderly patients after multiple logistic regression analyses. **Conclusions:** These results suggest that depressive elderly patient with SMC is more likely to be in difficulty in activities of daily living.

P4-068

#### SPANISH TRANSLATION AND NORMATIVE DATA FOR THE DEMENTIA RATING SCALE, SECOND EDITION

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**Background:** The Dementia Rating Scale, Second Edition (DRS-2) is a brief, multi-faceted screening tool that is widely used in the field of neuropsychology to assess adults for neurocognitive decline, including Alzheimer's disease. This measure is composed of 5 sub-scales that examine attention, initiation/perseveration, construction, conceptualization, and memory, which combine for a total score. Research has shown the utility of this mea-

sure for the English-speaking community. However, normative data for the Spanish translation of the DRS-2 (ST-DRS-2) is not available. As the Hispanic population continues to grow in the US, neuropsychological measures must be normed and validated specifically for Spanish-speakers to identify neurocognitive decline and to provide accurate diagnostic services. **Methods:** Twenty-two primarily Spanish-speaking community volunteers, ages 50-59 were administered the ST-DRS-2, the Beck Depression Inventory-Second Edition (BDI-II), and a structured clinical interview. Individuals with a medical history of stroke, TIAs, seizures, and head trauma were excluded from this study, as well as those found to be more than mildly depressed on the BDI-II. Given the influence of education on neuropsychological performance, groups were stratified by level of education (6-12 years of education and 13 or more years). **Results:** Two participants were excluded from the statistical analyses due to moderate and severe levels of depression. Education level and years of residency in the US were not significantly correlated with the ST-DRS-2 sub-scores and total score. Furthermore, no significant differences between the education groups on the sub-scales and the total score of the ST-DRS-2 were found, suggesting that performance on this measure is not influenced by education, when 6 or more years of schooling have been obtained. Normative data for Spanish speaking adults, ages 50-59 with 6 or more years of education will be presented for the ST-DRS-2. **Conclusions:** Results highlight the need for Spanish neuropsychological normative data for translated measures that are utilized within the US to assess for Alzheimer's disease and other dementias. The influence of education on the ST-DRS-2 for primarily Spanish-speaking adults with less than 6 years of education will be examined. Normative data for ages 60-69 is also being collected.

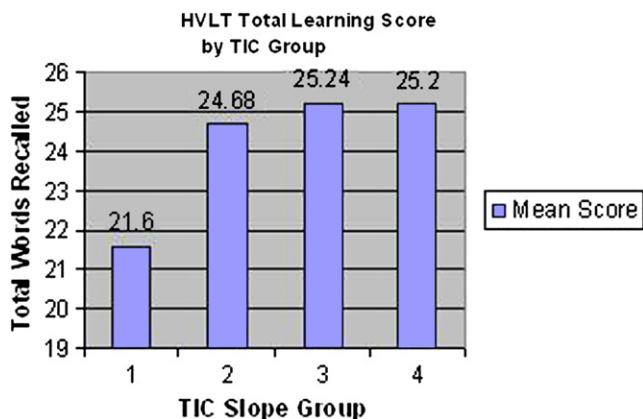
P4-069

#### RELATIONSHIP BETWEEN LONGITUDINAL TELEPHONE SCREENING AND NEUROPSYCHOLOGICAL TEST PERFORMANCE

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**Background:** Early detection of dementia is an important factor in effective disease management, as well as in planning for patients and their families. This study's purpose was to assess convergence of longitudinal telephone screening for dementia and traditional neuropsychological testing. **Methods:** Participants were 83 older adults (49 females) from a longitudinal cohort of the Michigan Alzheimer's Disease Research Center. All were cognitively normal upon study entry. Mean age at entry was 71.3 (SD=4.4). Annually, up to 9 years (mean=7.5 years, SD=0.7), participants completed the Telephone Interview for Cognitive Status (TICS), a standardized cognitive functioning screening. Within 6 months of their final TICS evaluations, participants completed a brief, face-to-face neuropsychological test battery (Hopkins Verbal Learning Test-Revised [HVLRT], Trails A & B, WAIS-III Digit Symbol Coding). For analyses, participants were divided into groups based on the slope of their TIC scores over time: Group 1 mean=-0.44, SD=0.25 (min=-1.33, max=-0.25); Group 2 mean=-0.11, SD=0.07 (min=-0.23, max=-0.02); Group 3 mean=0.07, SD=0.06 (min=-0.01, max=0.17); Group 4 mean=0.30, SD=0.07 (min=0.18, max=0.46). **Results:** There were no significant age or gender differences among slope groups. Group 1, which had the most negative slope (greatest decline) in TIC scores over time, consistently scored significantly lower on the neuropsychological measures (HVLRT Total Learning, HVLRT Delayed Recall, Trails A, Trails B, Digit Symbol). However, neuropsychological test performance for Groups 2, 3, and 4 was not significantly different from one another. See Figure 1 for an example ( $p < 0.01$ ). **Conclusions:** Consistent with its original design as a cognitive screening measure, longitudinal use of the TICS did distinguish a group of participants who were most likely to have a progressively poorer cognitive performance over time. This group's pattern of decline on the TICS also was related to poorer performance on traditional neuropsychological measures, as compared to participants with more stable or improving patterns of TICS performance. These results give additional support to the usefulness of the TICS as a brief screening measure of cognitive performance, particularly if it is

used longitudinally. However, it does not appear that the TICS is sensitive in distinguishing more mild or moderate levels of cognitive impairment.



#### P4-070 FALSE RECOGNITION IN ALZHEIMER'S DISEASE AND MILD COGNITIVE IMPAIRMENT

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**Background:** False Recognition, usually called False Alarm (FA), is a common type of memory distortions in which an individual incorrectly claims to have encountered a novel object or event. Although the hippocampus has been shown to be the responsible brain region, few studies have reported its clinical manifestation in the progression of Alzheimer's disease (AD). We analyzed the data on FA responses in the word recognition task in Alzheimer's Disease Assessment Scale-Cognitive subscale (ADAS-Cog) in patients with AD, with mild cognitive impairments (MCI), and normal controls. **Methods:** The data of 28 patients with probable AD, 28 patients with MCI, and 58 age-matched controls, were analyzed. AD was diagnosed according to the criteria of the National Institute of Neurological and Communicative Disorders and Stroke (NINCDS) and the Alzheimer's Disease and Related Disorders Association (ADRDA). Patients with MCI were diagnosed on the basis of showing intact daily activity, normal Mini-Mental State Examination (MMSE, 30-25), and deviated memory reduction (less than 85) in at least one index of Wechsler Memory Scale Revised (WMS-R). MRI and SPECT were administered to MCI patients. They showed reduced cerebral perfusion in the right or left hippocampus, or in bilateral parietal lobes and posterior or anterior cingulate gyrus. One of them showed slight lacuna infarctions, though applied to the above criteria. Normal control subjects were attending a municipal physical fitness program for senior citizens. All of them showed normal MMSE (28-30), and normal memory scores in all WMS-R indexes. **Results:** FA was observed in patients with AD more frequently than patients with MCI and normal controls at a statistically significant level ( $p < 0.000$ ). No statistically significant difference was found between the groups of MCI and controls. FA was observed in 27 out of 28 AD patients, but with one exception, none was observed in MCI or in normal controls. **Conclusions:** The presence of FA in the word recognition test of ADAS-Cog could be used as one of the markers to detect the onset of AD in the progression of the disease from MCI to AD, although it was not sensitive to detect its prodromal phase.

#### P4-071 ANALYSIS OF TOP-DOWN CONTROL AND SPATIAL ATTENTION IN MILD COGNITIVE IMPAIRMENT AND ALZHEIMER'S DISEASE: RELATIONSHIP TO APOE4 GENOTYPE

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**Background:** Accumulating evidence suggests that deficits of visual selective attention may already occur at early stages of dementia like the prodromal phase of Mild Cognitive Impairment (MCI). **Methods:** For the attentional assessment in patients with MCI and probable Alzheimer's disease (AD), we used partial report of brief letter arrays in combination with Bundesen's theory of visual attention (Bundesen, 1990). On the basis of performance in this task TVA provides two mathematically independent and quantitative parameter estimates: task-related weighting for prioritizing relevant visual objects (top-down control), and the spatial distribution of attentional weights across the left and right hemi-field. **Results:** Compared to an age-, gender- and education-matched healthy control group, AD patients showed significantly reduced top-down control functions whereas MCI patients were unimpaired. In contrast, spatial attentional weighting was already highly significantly unbalanced across hemifields in MCI. While the majority of patients were lateralized to the left hemifield, a rightward attentional bias was also found in a few patients. In the AD stage the bias was even more pronounced. Controls showed balanced spatial weighting across both hemifields. Analysis of the effects of ApoE4 genotype (positive versus negative) and age (65 years) on spatial attentional weighting in a combined patient group suggests that especially in young, ApoE4-positive patients a pathological leftward spatial bias prevails. For both partial report parameters correlations with clinical criteria like e.g. the Clinical Dementia Rating Scale (CDR; Morris, 1993) rating the overall severity of cognitive deficits and the neurological status according to The Consortium to Establish a Registry for Alzheimer's Disease (CERAD; Thalman et al., 1997) were found. **Conclusions:** In conclusion, already the early MCI stage in the neurodegenerative progression to dementia seems to be characterized by pathologically unbiased spatial weighing. At the AD stage, reduced selectivity of top-down control appears to emerge additionally. Probable underlying genetic ApoE4 pathology seems to be related with spatial attention, irrespective of disease stage. Consequently, these results emphasise the necessity of the application of sensitive tools for the assessment of task-related and spatial attentional selection in Alzheimer's disease.

#### P4-072 HOW MANY TESTS ARE REQUIRED FOR DIAGNOSIS OF MEMORY IMPAIRMENT?

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**Background:** An increased number of elderly in communities may lead to a dementia pandemic. Diagnosis dementia and starting of a pharmacological treatment as early as possible is important, because dementia imposes an emotional and economic burden on the society. Consequently there is an increasing need for efficient cognitive screening instruments to distinguish the elderly with Mild Cognitive Impairment (MCI), who are at risk of developing dementia, from the healthy elderly. This study aims to evaluate individual's cognitive functional features in a community based system. **Methods:** In this study, individuals, who are isolated memory impairment complaints and were referred to the Alzheimer Associations Branch in Mersin, Turkey by their consultants, neuropsychological evaluations were made. The individuals were assessed with a neuropsychological test battery including Standardized Mini Mental State Examination Test (MMSE), Geriatric Depression Scale, Functional Activities Questionnaire (FAQ), 3Words3Shapes Test (3W3S), Clock-drawing Test (CDT), Color Trails Test form A-B (CTT 1-2), Verbal Fluency Test (human, animal, human/animal), Visual Verbal Test. Demographic features of individuals were assessed by the same team. **Results:** A total of 50 subject were included in the study; 60 % of patients were female (mean age; 58.2) and 40 % of patients were male (mean age; 59.5). There are high