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25th European Congress of Psychiatry e-Poster Walk part 2

e-Poster walk: Old-age psychiatry

EW0191

Hippocampal volume recovery after depression: Evidence from an elderly sample

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Objectives Structural neuroimaging studies have revealed a consistent pattern of volumetric reductions in both the hippocampus and the anterior cingulate cortex (ACC) of individuals with a major depressive episode (MDE). This study investigated hippocampal and ACC volume differences in the elderly comparing currently depressed individuals and individuals with a past lifetime history of MDE versus healthy controls.

Methods We studied non-demented individuals from a cohort of community-dwelling people aged 65 and over (ESPRIT study). T1-weighted magnetic resonance images were used to acquire anatomical scans from 150 currently depressed individuals, 79 individuals with at least one past MDE, and 310 healthy controls. We derived quantitative regional estimates of subcortical volume of hippocampus and ACC using FreeSurfer Software (automated method). Concerning hippocampus, we also used a manual method of measurement. General Linear Model was used to study brain volumes in current and past depression adjusting for gender, age, education level, total brain volume, and anxiety disorder comorbidity.

Results After adjustment, current depression was associated with a lower left posterior hippocampal volume ($F=10.38$, $P=0.001$) using manual estimation of volume. No other significant differences were observed. A positive correlation was found between time since the last MDE and left posterior hippocampal volume.

Conclusions The finding of left posterior hippocampal volume reduction in currently depressed individuals but not in those with a past MDE compared to healthy controls could be related to brain neuroplasticity. Additionally, our results suggest manual measures to be more sensitive than automated methods.

Keywords Major depressive episode; Late life depression; Brain imaging; Biological psychiatry; Magnetic resonance imaging

Disclosure of interest The authors have not supplied their declaration of competing interest.

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EW0192

Introduction to mindfulness: A pilot exploratory study among memory clinic attendees

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Background Evidence from the literature suggests that group mindfulness interventions result in improved quality of life, less depressive symptoms and improved subjective sleep quality among patients with memory problems [1].

Objectives To design and pilot a brief mindfulness intervention for Memory Clinic attendees.

Aims To develop a non-pharmacological low-resource intervention for Memory Clinic attendees.

Methods An introduction to mindfulness pack, designed by author CD, includes a booklet introducing the concept of mindfulness, instructions for meditation exercises with an accompanying CD. Memory clinic attendees diagnosed with subjective memory complaints or mild cognitive impairment were invited to take part. Participants completed standardised questionnaires pre- and post-intervention, which examined subjective memory, depression and anxiety symptoms, subjective sleep quality, worry and mindfulness levels. Qualitative information was also gathered.

Results Of twenty-four participants (66.6% female, mean age 60.8 years), 14 (58.3%) completed the 6-week study. There was no statistical difference in anxiety and depressive symptoms, quality of life, sleep quality and worry levels pre- and post-intervention among participants. However, 100% of participants found the mindfulness intervention beneficial, with 64.3% ($n=9$) reporting a subjective improvement in both memory and concentration.

Conclusions In this small pilot study, a brief self-guided mindfulness intervention was found to be acceptable to a heterogeneous group of Memory Clinic attendees.

Disclosure of interest The authors have not supplied their declaration of competing interest.

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Reference

[1] Paller KA, Creery JD, Florzak SM, Weintraub S, Mesulam M-M, Reber PJ, et al. Benefits of mindfulness training for patients with progressive cognitive decline and their caregivers. *Am J Alzheimer's Dis Other Dementias* [Internet] 2014 Aug 25 [cited 2014 Nov 6].

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EW0193

Economic recession and mental health distress: Does age matter?

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Introduction The association between economic crises and mental health problems can be attributed to a number of factors. Among these, age seems to be an important determinant.

Objectives The aim of this study was to assess whether mental health of the Portuguese population following the onset of the 2008 recession, differs by age groups.

Methods A follow-up study (2015) on the population aged 18 to >65 years old, using the National Mental Health Survey ($n=911$). The age-group prevalence of mental health distress assessed by the ten-item Kessler's Psychological Distress Scale (K10) was calculated using χ^2 statistics and mental distress as a categorical variable ($P<0.05$).

Results Mean mental distress score differed significantly according to age group, $\chi^2(3)=10.684$, $P<0.05$. The results showed that the older groups (50–64 and 65+ years old) were more frequently under mental distress (17–19%) compared to younger people (18–49 years old), which were less likely to report being distressed (8–12%).

Conclusions Age seems to be an important determinant of distress levels during the economic crisis in Portugal. Older adults reported to be more distressed compared to younger individuals. There are several hypotheses for a differential expression of psychological distress between age groups such as working status and retirement, which can express differential access to coping resources under such contextual negative pressure of economic recession. Further research on age groups is thus needed to better understand how recession generates adverse effects on mental well-being.

Keywords Distress; Age; Mental health; Recession; Older adults
Disclosure of interest The authors have not supplied their declaration of competing interest.

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EW0194

The effect of apolipoprotein E $\epsilon 4$ (APOE E4) on visuospatial working memory in healthy elders and amnesic mild cognitive impairment patients: An event-related potentials study

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Introduction Previous studies provided inconsistent evidences for the effect of apolipoprotein E $\epsilon 4$ (APOE $\epsilon 4$) status on the visuospatial working memory (VSWM). Our study was the first investigation with event-related potential (ERP) to explore the effect of APOE $\epsilon 4$ on VSWM in healthy elders and aMCI patients.

Objective The aim was to investigate the effect of APOE $\epsilon 4$ on VSWM with event-related potential (ERP) study in healthy elders and aMCI patients.

Methods Thirty-nine aMCI patients (27 APOE $\epsilon 4$ non-carriers and 12 APOE $\epsilon 4$ carriers) and 43 their matched control (25 APOE $\epsilon 4$ non-carriers and 18 APOE $\epsilon 4$ carriers) performed an N-back task, a VSWM paradigm that manipulated the number of items to be stored in memory.

Results Our study detected reduced accuracy and delayed mean correct response time in aMCI patients than healthy elders. P300 was elicited by VSWM and its amplitude was lower in aMCI patients at the central-parietal and parietal electrodes than healthy controls. In healthy elders, P300 amplitude declined prior to task performance change in APOE $\epsilon 4$ carriers than non-carriers. Regarding aMCI patients, P300 amplitude result revealed exacerbated VSWM deficits in APOE $\epsilon 4$ carriers than APOE $\epsilon 4$ non-carriers. Additionally, standardized low-resolution brain electromagnetic tomography analysis (s-LORETA) result showed enhanced brain activation in right parahippocampal gyrus during P300 time range in APOE $\epsilon 4$ carriers than non-carriers in aMCI patients (Fig. 1, Tables 1 and 2).

Conclusions It demonstrated that P300 amplitude might serve as a biomarker for recognizing aMCI patients and contribute to early detection of worse VSWM in APOE $\epsilon 4$ carriers than non-carriers.

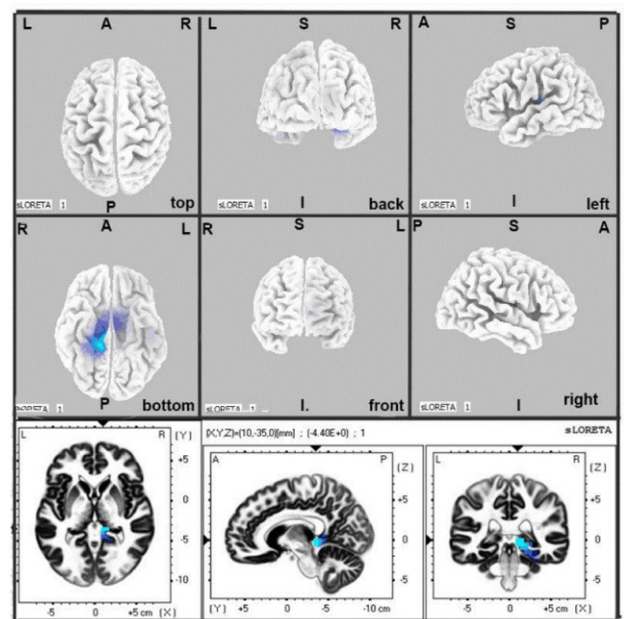


Fig. 1 The sLORETA images showing statistical differences between aMCI- APOE $\epsilon 4$ - and aMCI- APOE $\epsilon 4$ + group (3D-view and slice-view) in the P300 time-range. The three slice-view images below located the maximal difference between aMCI- APOE $\epsilon 4$ - and aMCI- APOE $\epsilon 4$ + group (MNI coordinates $x, y, z=10, -35, 0$). Negative difference was in blue color with reference of aMCI- APOE $\epsilon 4$ + group. Abbreviations: aMCI: amnesic mild cognitive impairment; APOE: apolipoprotein E; MNI: Montreal Neurological Institute; sLoreta: standardized low-resolution brain electromagnetic tomography analysis.