underrepresented minorities, in particular. Our work signals the importance of differentiating language from culture in intervention development for older, primarily Spanish-speaking Latinas/os with high medical comorbidity.

SESSION 3075 (PAPER)

MARKERS AND BIOMARKERS OF DEMENTIA

BDNF GENOTYPE AND CHANGES IN WHITE MATTER HYPERINTENSITIES AND HIPPOCAMPAL MICROSTRUCTURE IN OLDER MEN AND WOMEN

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Brain-derived neurotrophic factor (BDNF) may protect against cerebral gray and white matter impairments in older age. The val66met genetic polymorphism of BDNF is recently emerging as an early marker of brain structural integrity. However, evidence is sparse, cross-sectional, and mostly in men. In a longitudinal cohort study of community-dwelling older adults (N=139, mean age=81.6, 58% female, 58% white, mean follow-up=3.4 years), we estimated the overall and sex-stratified effects of BDNF val66met polymorphism on changes in cognition and gray and white matter macro- and micro-structure. Annualized percent change was computed for volume of white matter (WM) hyperintensities and gray matter (GM), fractional anisotropy of normal appearing WM, and mean diffusivity (MD) of GM in whole brain and memory and executive control function networks. Significant associations were adjusted for variables differing by genotype (race, APOE4, diabetes, triglycerides, smoking). Compared to met carriers, val homozygotes had slower annual whole brain WMH accrual (median (IQR) 31.4% (61.7) vs. 60.7% (92.4)), stronger in women. Met carriers had slower annual accrual of hippocampal MD (median (IQR) 1.26% (0.92) vs. 1.85% (1.09) for right hippocampus, stronger for women, and 1.45% (1.06) vs. 1.97% (1.22) for left hippocampus, stronger for men) compared to val homozygotes. Associations were robust to covariates' adjustment. BDNF polymorphism was not associated with cognitive changes. BDNF polymorphism may help in early identification of those more likely to resist accrual of WMH and loss of hippocampal microstructural integrity, with effects varying by sex.

DUAL DECLINE IN MEMORY AND GAIT UNIQUELY IDENTIFIES OLDER PERSONS AT HIGH RISK OF DEMENTIA

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Recent study has shown that incident dementia risk is higher among older persons who decline in both cognition and gait. This study assesses whether this relationship exists in multiple other aging populations. Data are from the Baltimore Longitudinal Study of Aging (n=662, 51% women, 22% blacks), Health, Aging and Body Composition Study (n=746, 51% women, 44% blacks), and Mayo Clinic Study of Aging (n=2771, 48% women, 0.3% blacks). Participants were at least 60, initially free of cognitive impairment, dementia, and dismobility (gait speed≤0.6m/s), with repeated measures of verbal memory and gait speed before dementia diagnosis (average follow-up 5.8-12.1 years). Within each cohort, participants were divided into four groups: memory decliners alone, gait decliners alone, dual decliners, or neither (healthy agers). Gait speed decline was defined as a loss of ≥0.05m/sec/year; memory decline was defined as cohort specific bottom slope tertile. Incident dementia risk was examined by Cox regression with healthy agers as reference, adjusted for sex, race, baseline age, gait speed and memory. Across studies, incident dementia ranged from 3% to 17%. Compared to healthy agers, memory decliners alone had 3.4 to 4.3 times higher risk for developing dementia ($p<0.01$). Gait decliners alone had 2.1-5.6 times higher risk for dementia ($p<0.05$). Dual decliners had 7.6-10.8 times the risk ($p<0.001$). Dual decline signifies a more rapid progression to dementia. These consistent findings suggest that dual decliners might be a potentially valuable target group for both preventive interventions and mechanistic studies. Whether dual decline identifies a particular subtype or multiple subtypes of dementia remains to be investigated.

SURVIVAL OF PEOPLE WITH CLINICAL DIAGNOSIS OF DEMENTIA IN HONG KONG: A POPULATION-BASED STUDY

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Objectives: Studies on survival of people with clinical diagnosis of dementia can provide estimates of care outcomes of a health system and offer real-life insights on how to provide better support for the target population. This study aims to estimate survival from the point of recorded diagnosis of dementia, compared with people without dementia. Methods: This case-control study used data from Clinical Data Analysis and Reporting System (CDARS), a population-wide databased managed by Hong Kong Hospital Authority. All patients aged 60 years or over with a first-ever code for dementia from 2001 and 2010 (N=24,250) were matched with patients without dementia by sex and index date at a 1: 2 ratio. We adopted Cox proportional hazard model to estimate hazard ratios, with and without adjustment for age, sex, and comorbidities (diabetes,