

THE RELATIONSHIP BETWEEN PERSONALITY AND PERCEIVED MENTAL FATIGABILITY

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Several personality traits are known to be protective against global fatigue, however perceived mental fatigability (PMF, Pittsburgh Fatigability Scale 0-50) specifically measures an individual's susceptibility to cognitive tiredness and is associated with mobility decline. We assessed whether optimism, conscientiousness, goal reengagement and goal disengagement contributed to greater PMF in 1,812 men (mean±SD age 84.4±4.2 years, 90.4% white) in the Osteoporotic Fractures in Men Study 4th visit (2014-2016). Covariates included demographic, psychological/behavioral factors, health conditions, physical activity and function. Prevalence of higher PMF (score ≥13) was 25% (n=448). In a covariate-adjusted regression model, each SD lower conscientiousness and lower optimism were associated with 0.93 and 0.61 SDs greater PMF, each p<0.01. Goal disengagement and goal reengagement were not associated with PMF. These findings warrant further investigation into how personality traits may help clinicians design targeted and effective interventions to reduce fatigability, and consequently lower the risk of adverse aging-related health outcomes.

CHANGES IN SELF-REPORTED ENERGY AND BRAIN VOLUMES

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The brain demands and consumes more energy than any other organ. Lower perceived energy may indicate compromised brain health. Little empirical data exists on the association between perceived energy and brain structure. Neuroimaging was obtained in 300 participants (mean age=83±3 y/o, 40% blacks, 57% women) with repeated self-reported energy measures (scale 0-10) in the past decade. Energy decline was computed as rate of change by linear mixed models (-0.06/year). Associations of energy decline with volumes of cognitive (dorsolateral prefrontal cortex, hippocampus) and motor (precentral gyrus, putamen, caudate) areas were examined using linear regression, adjusted for demographics and total gray matter atrophy. A steeper decline in energy was associated with smaller volumes of right putamen (p=0.013) and caudate (p=0.043), a trend in right precentral gyrus (p=0.085), but not in prefrontal cortex or hippocampus. Declining energy by self-report may indicate atrophy localized in subcortical motor areas. Studies to identify the mechanisms underlying these associations are warranted.

THE LONGITUDINAL ASSOCIATION OF WALKING EFFICIENCY WITH BRAIN VOLUMES IN COMMUNITY-DWELLING OLDER ADULTS

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Walking efficiency (WE) predicts mobility decline and is linked with higher fatigability. Fatigability is associated with cognitive decline and reduced brain volumes (BV), but the link between WE and BV is undefined. We examined associations between WE and BV in 860 participants of the BLSA (mean age 66.4(14.4) years, 54.5% women). WE was assessed during 2.5-minutes of usual-paced walking using indirect calorimetry and standardized per meter (ml/kg/m). BV measures were derived using MRI scans and an automated multi-atlas region-of-interest approach. In linear mixed models adjusted for demographics, education, BMI, intracranial volume, and cognitive status, lower baseline WE was associated with lower total, white, and gray matter, primarily in the frontal and temporal lobes (all p<0.05). Longitudinally, declining WE was associated with increasing ventricular and decreasing hippocampal volumes over follow-up (all p<0.01). Findings suggest rising age-related inefficiencies may reflect underlying brain atrophy and serve as a novel indicator for future interventions.

SESSION 7170 (SYMPOSIUM)

MUSIC AND BRAIN HEALTH: RECOMMENDATIONS FROM THE GLOBAL COUNCIL ON BRAIN HEALTH, AN AARP COLLABORATIVE

Chair: Sarah Lock

Music is a complex auditory stimulus that resonates on a physiological, psychological, and spiritual level for people around the world. This symposium will provide highlights from the Global Council on Brain Health consensus report aimed at helping the public to understand the potential that music holds for supporting and enriching brain health. The Global Council on Brain Health (GCBH) is an independent collaborative of scientists, clinicians, scholars, and policy experts convened by AARP to provide evidence-based advice on what people and professionals can do to maintain and improve brain health. The Council translates scientific research into actionable recommendations for the public that will help drive behavior change in individuals across communities and cultures. Issue specialists from around the world were brought together to build consensus, issue recommendations, and offer practical tips. Moreover, we will feature research from our issue experts and provide an overview of the impact of music participation on older adults, including those with dementia. Data from surveys fielded by AARP research, developed in consultation with the GCBH, will also be featured. In sum, this presentation will highlight