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±SD 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
the work of the Council at the forefront of this international effort to translate advancements in brain health research to the wider public, with an emphasis on individuals aged 50 and older.

GLOBAL COUNCIL ON BRAIN HEALTH: CONSENSUS AND RECOMMENDATIONS FOR PROMOTING BRAIN HEALTH THROUGH MUSIC ENGAGEMENT

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This presentation will summarize the points of consensus reached by the experts and describes the major points of discussion that led to their recommendations for men and women age 50 and older. The GCBH considered questions surrounding what happens in the brain when listening to music as well as creating music. Topics such as music therapy and the clinical dimensions of introducing music into caring for patients will be addressed. Alongside the consensus points, recommendations and practical tips will be presented. Moreover, we will also identify gaps in our knowledge that currently exist in the evidence base surrounding music and brain health.

THE EFFECT OF MUSIC THERAPY ON COGNITIVE FUNCTIONING AMONG OLDER ADULTS

Kuei-Min Chen, Kaohsiung Medical University, Kaohsiung City, Taiwan (Republic of China)

Music creates and fosters connection and interrelationships between individuals and encourages social interaction. Indeed, community-based interventions are a powerful way to engage older people. This presentation will provide an overview of music therapy and the impact it can have on the cognitive functioning of older people. Examples of music therapy interventions in the community can be found in nursing homes, hospitals, or communities. Differences in receptive (passive) music therapy and active music therapy will be discussed along with the impact these therapies may have on individuals experiencing cognitive decline. Moreover, studies of music therapy combined with other activities, such as exercise or art will be discussed. This research will be presented within the context of the recommendations put forth by the Global Council on Brain Health aimed at adults aged 50+

BENEFITS OF THE UNFORGETTABLES: A CHORUS FOR PEOPLE WITH DEMENTIA TOGETHER WITH THEIR FAMILY CAREGIVERS

Mary Mittelman, NYU School of Medicine, New York, New York, United States

The Unforgettables was founded in 2011 for people with dementia and their family caregivers. We hypothesized that singing and rehearsing together would providing an opportunity for people in the early and moderate stages of dementia and their family caregivers to share a normative, stimulating and social activity. Pilot study results showed that quality of life and communication with the other member of the dyad improved for people with dementia; quality of life and, social support, communication and self-esteem improved for caregivers. Moreover, people with dementia learn new songs for every performance, suggesting that this activity may slow cognitive decline. The chorus continues to rehearse and perform, and now has approximately 100 members in two locations in NYC. These findings support the recommendations of the Global Council on Brain Health by underscoring the many benefits of music performance in enhancing social engagement and providing joy to participants and the community.

SESSION 7175 (SYMPOSIUM)

NEW EVIDENCE ON THE BIOBEHAVIORAL MECHANISMS OF CHRONIC PAIN IN AGING AFRICAN AMERICANS

Chair: Staja Booker

African American older adults are living longer with chronic pain, which presents a huge personal and societal burden. A growing group of scholars are now devoted to accurately and precisely characterizing and phenotyping the experience of pain in aging using within-group and advanced methodological designs to elucidate the biopsychosocial-behavioral responses to pain. In this symposium, five dynamic presenters present new evidence on mechanisms of pain in older African-Americans. Dr. Roach’s investigation reveals the effect of genetic alterations of sickle cell disease (SCD) on stress-related pain in younger and older adults; this scientific inquiry is especially important because there is little research on SCD in aging. Next, Dr. Terry, extends these findings by exploring the association between psychosocial factors such as experiences of discrimination, pain catastrophizing, and perceived stress on neural (brain) responses via magnetic resonance imaging. From a clinical perspective, Dr. Booker reports on the first-ever model of intra-racial differences in movement-evoked pain in older African-Americans with knee osteoarthritis and healthy controls. Our final two presenters use a translational approach to identify how older African-Americans cope with chronic pain. Dr. Robinson-Lane’s study highlights the unique experience and predictors of coping, adaptation, and self-management of chronic pain in Black dementia caregivers. Finally, Dr. Cobb’s research from a large cross-sectional study correlates social, behavioral, and health factors with opioid and psychotropic use in economically disadvantaged older African-Americans. This symposium offers novel ways of understanding social determinants of pain and assisting African-Americans and their caregivers to manage complex chronic pain in later life.

A PRELIMINARY MEASUREMENT AND UNDERSTANDING OF MOVEMENT-EVOKED PAIN IN AFRICAN AMERICAN ELDER ADULTS

Staja Booker, The University of Florida, Gainesville, Florida, United States

Osteoarthritis (OA) is a principal cause of disabling knee pain, and movement is a known exacerbator of pain in African Americans (AAs). Still, research has neglected to understand the relationship between pain with movement and its impact on function and mobility. Our previous study found significantly higher movement-evoked pain between AAs and White American (WAs). Therefore, this case-control observational study investigated inter-racial and intra-racial differences in movement-evoked pain in AAs and WAs (N=28) who were 55-78 years-of-age (M= 65.75, SD= 6.23).