

Tukey HSD correction was conducted using SPSS Version 24.

Results: MCI and SCD groups endorsed worse EF on all three index scores ($ps < .005$) and all nine clinical scales ($ps < .05$) relative to the HC group, and the MCI group reported worse initiation relative to the SCD group. Additionally, worse executive functions on all three index scores ($ps < .05$) and four clinical scales ($ps < .05$; emotional control, self-monitoring, planning/organization, and task monitoring) were reported by the young-old group relative to the old-old group. No diagnosis by age-group interactions were observed.

Conclusions: Problems with aspects of EF were endorsed by older adults with MCI and SCD compared to HCs across all indices and clinical scales; however, only initiation was reported to be worse in MCI than those with SCD. Additionally, the young-old group endorsed having worse EF than the old-old group across BRIEF-A indices and several more specific aspects of EF, without a moderating effect of diagnosis. These findings highlight the importance of assessing subjective EF in older adults, as they may be early indicators of cognitive change, prior to objective evidence of cognitive decline. Furthermore, results also point to differences in how the young-old and old-old perceive their EF in everyday life.

Categories: Executive Functions/Frontal Lobes

Keyword 1: executive functions

Keyword 2: mild cognitive impairment

Keyword 3: aging disorders

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91 Personality Traits Account for Variability in Self-Reported Executive Functioning but not Objective Executive Performance.

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Objective: This study evaluated the relation between five-factor model (FFM) personality traits and intra-individual variability (IIV) in

executive functioning (EF) using both subjective self-report and objective measures of EF.

Participants and Methods: 165 university participants ($M=19$ years old, $SD=1.3$; 55.2% White, 35.2% African American, 72.7% female) completed the Barkley Deficits in Executive Functioning Scale-Long Form (BDEFS), IPIP-NEO Personality Inventory, Trail-Making Test (TMT) Parts A and B, and the Neuropsychological Assessment Battery (NAB) EF module. A participant's IIV was calculated as the standard deviation around their own mean performance. Objective EF IIV was computed from T-scores for performance on Trails A, Trails B, and the NAB EF module. Subjective EF IIV was computed from T-scores for performance across BDEFS domains.

Results: Pearson r correlations were used to evaluate the relation between subjective and objective IIV and FFM traits of personality. Subjective EF IIV was positively correlated with FFM neuroticism [$r=.48$; $p<.001$] and negatively correlated with FFM conscientiousness [$r=-.43$; $p<.001$], extraversion [$r=-.18$; $p=.023$] and agreeableness [$r=-.22$; $p=.004$]. There were no significant associations between FFM traits and objective EF IIV performance. There was additionally no significant relation between subjective EF IIV performance and objective EF IIV.

Conclusions: Personality traits were associated with individual variability on a self-reported measure of EF but not on performance-based EF measures. These results suggest that IIV for the BDEFS was influenced by personality traits, particularly neuroticism and conscientiousness, and may reflect method variance. It was notable that IIV was not correlated between subjective and objective EF measures.

Categories: Executive Functions/Frontal Lobes

Keyword 1: personality

Keyword 2: executive functions

Keyword 3: assessment

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92 Inflammatory Biomarkers Mediate the Relationship between Perceived Stress and Executive Functions

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Objective: Psychosocial stress has been associated with impaired cognition and risk for neurodegenerative disease. However, the intermediate pathways underlying this relationship are not yet well understood. Chronic exposure to stress causes endocrine and immune dysregulation that can lead to heightened systemic inflammation. Moreover, chronic, low-grade inflammation has been linked to neurodegeneration, impaired neurogenesis and cognitive decline. Given the strength of the individual links between stress, inflammation and cognition, the current study tested the hypothesis that inflammatory biomarkers would mediate the relationship between perceived stress and executive functions.

Participants and Methods: Data from the Midlife in the United States Study (MIDUS) (N=863; Mean age= 52.72) provided measures of perceived psychological stress, inflammatory biomarkers [C-reactive protein (CRP) and interleukin-6 (IL-6)] and executive functions. Structural equation modeling (SEM) was used to test for the mediating effect of inflammation on the relationship between perceived stress and executive functions. Exploratory analyses were conducted to investigate whether sex-differences were driving these relationships. Mediation analyses adjusted for age and history of smoking.

Results: In the full sample of men and women, there was a significant indirect effect of perceived stress on executive functions through inflammation [$B=-0.021$, $z=-2.841$, $p=0.005$]. Further examination revealed that this effect was present in women [$B=-0.039$, $z=-2.680$, $p=0.007$] but not men [$B=-0.003$, $z=-0.558$, $p=0.577$]. While inflammation was negatively associated with executive functions in both men and women [$B=-0.126$, $z=-1.930$, $p=0.050$; $B=-0.279$, $z=-0.558$, $p>0.001$], pathways linking perceived stress to inflammation and executive functions were only significant in women [$B=0.014$, $z=-3.190$, $p=0.001$; $B=-0.192$, $z=-3.355$, $p=0.001$].

Conclusions: These findings suggest that inflammatory biomarkers are a viable pathway for explaining how experiencing stress can negatively affect executive functions. Results indicate that women may be particularly vulnerable to the inflammatory and cognitive consequences of stress. As such, psychosocial stress and associated inflammation may be important targets for improving cognitive health outcomes, particularly in women.

Categories: Other

Keyword 1: chronic stress

Keyword 2: executive functions

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Poster Symposium: How Well do Western Methods Used to Assess Atypical Aging in Western Countries Generalize to Sub-Saharan African Countries?

Chair

Suzanne Penna
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Discussant

Jean Ikanga
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Summary Abstract:

Risk factors associated with development of neurodegenerative disease has been well-studied in Western and European populations. However, there has been considerably less research in the assessment of such risk factors in developing countries, notably sub-Saharan Africa. There is a paucity of data at the micro level (e.g. neuroimaging and biomarker data) and macro level (e.g. cognitive assessment and psychosocial/environmental risk factors) for development of neurodegenerative conditions in these populations.

This symposium examines Western methods of assessment of risk factors and cognitive profiles of older adults at risk for neurodegenerative disorder to determine if they are relevant to sub-Saharan African populations, specifically older Congolese adults. This symposium utilizes an older adult sample that has been comprehensively assessed both at the cellular level (via blood biomarkers and neuroimaging typically used for assessment of dementia in Western populations), to the individual functional level (via cognitive assessment), to finally, psychosocial and environmental risk factors for dementia seen at a community level. First, Dr.