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6 Examining Relationships Between Perceived Discrimination, Metabolic Syndrome, and Cognition

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Objective: Discrimination on the basis of race, gender identity, and age, among others, has been associated with negative cognitive outcomes. However, the mechanisms by which perceived discrimination impacts cognition are not yet well understood. Discrimination can lead to chronic stress, which disrupts glucocorticoid pathways and induces susceptibility to metabolic dysregulation. On the basis of this prior work, and the known associations between metabolic syndrome and cognition, the current study examined the hypothesis that metabolic syndrome mediates the relationship between discrimination and cognition.

Participants and Methods: 1,063 adults (Mean age = 54.92 years, SD = 11.68) who participated in the Midlife in the United States project were included. Confirmatory factor analysis was used to examine the acceptability of a bifactor model of metabolic syndrome using four subfactors (insulin resistance, adiposity, dyslipidemia, and blood pressure). The mediating effect of the metabolic syndrome latent factor on the association between discrimination and cognition was tested using PROCESS (Hayes, 2013). Exploratory analyses were conducted to examine which cognitive domains and which metabolic syndrome subfactors were driving these relationships. Mediation analyses adjusted for age, race, sex, and education.

Results: The three most frequently reported reasons for discrimination were gender ($n = 209$), age ($n = 174$), and race ($n = 129$). The CFA of metabolic symptoms was deemed acceptable based on previously outlined goodness of fit criteria (CFI = 0.986, TLI = 0.976, RMSEA = 0.040, SRMR = 0.034). Results of the mediation analysis indicated a significant indirect effect of major events discrimination on the total cognition composite through the general metabolic syndrome factor ($B = -0.0029$, 95% CI [-0.0016, -0.0066]). Further examination

revealed that this relationship was driven through an indirect path of metabolic syndrome on the relationship between discrimination and executive functioning ($B = -0.0024$, 95% CI -0.0059, -0.0001]). We examined which subfactors were driving these relationships and found that there were significant indirect effects of major events discrimination on total cognition through the insulin resistance ($B = -0.0028$, 95% CI -0.0065, -0.0003]) and dyslipidemia factors ($B = -0.0026$, 95% CI -0.0064, -0.0002]).

Conclusions: Our findings provide evidence that metabolic syndrome can help explain differences in cognitive functioning based on experiences of discrimination, even after adjusting for relevant demographic factors. Results from this study suggest that understanding the impact of perceived discrimination on metabolic syndrome and developing lifestyle interventions that can improve metabolic syndrome may be helpful in reducing stress-related cognitive disparities.

Categories: Other

Keyword 1: chronic stress

Keyword 2: minority issues

Keyword 3: cognitive functioning

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Poster Session 08: Assessment | Psychometrics | Noncredible Presentations | Forensic

3:30 - 4:45pm

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Town & Country Foyer

1 Psychometric comparison of the long and short forms of the Personality Assessment Inventory in a neuropsychiatric population

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Objective: The Personality Assessment Inventory (PAI; Morey, 1991; 2007) is a 344 item self-report measure of personality, psychopathology, and factors affecting treatment. The PAI short form (PAI-SF) contains the first 160 items of the PAI and is often favoured as a screening tool or brief version to mitigate respondent burden and fatigue. The PAI has been psychometrically validated among numerous populations (Slavin-Mulford et al., 2012), while psychometric research on the PAI-SF is gradually emerging. The psychometric properties of the PAI-SF range from adequate to strong in psychiatric (Sinclair et al., 2009), forensic (Sinclair et al., 2010), outpatient and nonclinical (Ward et al., 2018), and stroke (Udala et al., 2020) samples. To advance research validating the PAI-SF among diverse populations, this project investigated the psychometric comparability between the PAI and the PAI-SF in a neuropsychiatric population. Based on previous literature, it was hypothesized that the PAI-SF would produce congruent results to the PAI in this sample.

Participants and Methods: For this study, participant files (N=214) were collected retrospectively from short- and long-term residential psychiatric and substance use treatment facilities in Minnesota for patients with neurological and cognitive concerns referred for neuropsychological evaluation. The PAI-SF was scored using the first 160 items from a patient's long-form PAI protocol. To determine the psychometric comparability of long- and short-forms, paired-samples t-tests, intraclass correlations, and percent agreement in clinical classification between forms were analyzed.

Results: Analyses of participant data found that intra-class correlations ranged from .87 to .98 for each subscale on the PAI when compared to the PAI-SF, demonstrating good to excellent reliability between forms. Symptoms are considered clinically elevated when they exceed the clinical significance threshold for a subscale (typically a T-score of 70+). Agreement between the PAI and PAI-SF subscales in the classification of clinically elevated scores ranged from 86% to 100%. When forms did not agree, the PAI-SF was more likely to be clinically significant relative to the PAI. A comparison of subscale means between forms was examined

by independent samples T-tests with a Bonferroni correction. Results revealed significant differences between the PAI and PAI-SF on one validity scale (Negative Impression Management), three clinical scales (Anxiety; Depression; Antisocial Features), and one treatment scale (Treatment Rejection).

Conclusions: Results demonstrated that the PAI and PAI-SF have high reliability between forms in a neuropsychiatric population. Although mean scores differed on a small number of subscales between the PAI and PAI-SF, differences did not appear sufficiently large enough to shift clinical classifications, as the two forms performed similarly in their identification of clinically elevated scales. Findings align with previous literature and suggest that the PAI-SF may perform adequately in a neuropsychiatric population if brevity or participant burden is of concern. However, caution is warranted when making clinical decisions with the PAI-SF as more research is needed.

Categories:

Assessment/Psychometrics/Methods (Adult)

Keyword 1: assessment

Keyword 2: psychometrics

Keyword 3: neuropsychological assessment

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2 Mask Wearing During Neuropsychological Assessment Negatively Impacts Performance on Verbal Tests in Older Patients

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Objective: Face masks are required in many healthcare settings. Face masks have well documented health advantages, but they can negatively impact interpersonal communication, an essential element of neuropsychological assessment. The purpose of this study was to quantify the impact of face masks on neuropsychological assessment in a large clinical setting.