Effort testing is critical to neuropsychological practice, including dementia assessment. Questions exist around whether cognitive status or impairment severity impacts effort test performance in this population. Presently, we examined whether scores on an embedded effort test - the California Verbal Learning Test II Short Form (CVLT-II-SF) Forced Choice Recognition (FCR) - differed across diagnostic status groups and how severity of impairment modulated test performance. In a sample of memory clinic patients, three cognitive status groups were identified: subjective cognitive impairment (SCI; n = 92), amnestic mild cognitive impairment (a-MCI; n = 18), and dementia due to Alzheimer's Disease (AD; n = 70). Significant group differences in FCR performance were observed using one-way ANOVA (p < .001), with post-hoc analysis indicating the AD group performed significantly worse scores than the other groups. Using multiple regression, FCR performance was modelled as a function of cognitive status, impairment severity indexed MMSE, and their interaction, with a parallel analysis for the Clinical Dementia Rating Sum of Boxes (CDR-SOB) scores as an alternate severity measure. Results yielded significant main effects for MMSE (p = 0.019) and cognitive status (p = 0.026), as well as a significant interaction (p = 0.021). Thus, increases in impairment severity disproportionately impaired FCR performance for persons with AD, calling into question research-based cut scores for effort determination in dementia contexts. Corresponding CDR-SOB analyses were non-significant. Future research should examine whether CVLT-II-SF-FCR is an appropriately specific inclusion in a best-practice testing battery for evaluating effort in dementia populations.

EXAMINING STEREOTYPE THREAT IN NEUROPSYCHOLOGICAL TESTING: A USABILITY AND USER EXPERIENCE PILOT STUDY

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Stereotype threat is defined as the situational predicament when people feel at risk of conforming to social stereotypes. Correspondingly, stereotype threat may negatively impair a persons’ working memory and cognitive abilities during neuropsychological tests due to hyper awareness of negative stereotypes. Moreover, it is critical to test the usability and the user experience of application-based neuropsychological assessments within diverse aging adult populations. In this pilot study, verbal expressions of feeling pressure to succeed, within a diverse population of young adults, were examined while taking an application-based neuropsychological assessment. Data was collected from 15 self-identified respondents (i.e., 7 Latinx, 5 Asian, 3 Bi-racial). Before beginning the assessment, 8 out of 15 participants exhibited self-handicapping behaviors such as offering explanations of mental exhaustion due to work and lack of sleep. Literature suggests these expressions are related to the onset of anxiety prior to taking cognitive tests, and contribute to potentially offering an excuse in anticipation of poor performance. Additionally, 3 out of 15 participants noted that even though the tasks were simple, they felt unintelligent because they did not complete the tasks to their best abilities (e.g., “I felt stupid. It was simple”). Findings from this pilot support the negative impact stereotype threats have on feelings of inadequacy and increase of anxiety levels among ethnic minorities in testing settings. Further emphases on examining the usability and user experience of application-based tests are needed, particularly within a diverse population of aging adults to facilitate more culturally competent neuropsychological testing experiences.

FINDING FACTORS IN FOOTFALLS: EXPLORING THE FACTOR STRUCTURE OF GAIT IN OLDER ADULTS.

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Gait is a reputed marker of global health spanning various bodily systems (MacDonald et al., 2017) and is a robust predictor of deleterious age-related outcomes (Van Kan et al., 2009). However, the sheer number of individual gait variables employed as predictors in the existing literature can obscure interpretations. To address this issue, researchers have explored the factor structure of gait indicators to explain variance in age-related gait performance, identifying disparate models characterized by three to five underlying latent gait constructs comprised of 8 to 23 indicators (Hollman et al., 2011; Lord et al., 2013). Beyond this heterogeneity, additional limitations characterizing this literature include solutions that assume statistical independence among gait constructs, as well as inclusion of severely multicollinear indicators. Using data from the Healthy Minds Healthy Bodies (HMHB) study, the present research focused upon replicating and contrasting previous factor analytic efforts. HMHB participants (n=128) were healthy community-dwelling adults (Mage=72.81±5.24 years; female=100). Gait indicators from a GAITRite computerized walkway were selected according to a priori theoretical rationale, compatibility with previous studies, and consideration of multicollinearity. Gait factor structure was initially analyzed using principal component analysis. Results indicate the presence of three latent gait domains reflecting pace, rhythm, and variability, accounting for over 82.4% of the variance in gait performance. Current proceedings involve implementing confirmatory factor analysis to compare competing gait models. Findings will address disparities across factor models in the gait literature, as well as discuss the optimal number of factors for describing the underlying dimensionality of gait.

MEASUREMENT INVARINANCE IN THE ASSESSMENT OF MOOD BETWEEN AMERICAN AND MEXICAN COMMUNITY STUDIES

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The Health and Retirement Study (HRS), a principal source for American public health research, has numerous global sister studies. Harmonization efforts seeking to establish measurement equivalence amongst these various datasets, is a critical prerequisite to cross-cultural research. Given well-known cultural variability in depressive symptom endorsement, the purpose of this study was to assess measurement invariance in a brief mood measure used in the HRS and the Mexican Health and Aging Study (MHAS). Total sample size using both groups was 15,319 participants (10,931 HRS; 4,388 MHAS) who were 65 and older from Waves 6 to 13 in the HRS and Waves 1 to 4 in the MHAS. MPlus Version 8.4 was used to conduct CFA analyses of measurement invariance. A contemporary approach with categorical data calls for examining threshold invariance first while establishing configural invariance, before examining invariance tests of thresholds, loadings, and intercepts in a second step. Results were that measurement invariance was not supported in this series of two steps with four out of six indices showing model fit in the first model and none of the indices showing model fit in the second model. These findings implied that there were differences in ways of responding to the brief mood measure between HRS and MHAS participants at the conceptual level. Thus, comparisons based on these measures may result in misleading findings and should be interpreted very conservatively. This study adds to the growing body of literature guiding harmonization efforts from the Program on Global Aging, Health and Policy.

MEASUREMENT INVARINANCE OF NEGATIVE AFFECT IN AMBULATORY ASSESSMENTS OF YOUNG-OLD AND OLD-OLD ADULTS

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Gero-psychological research increasingly considered intense longitudinal assessments of momentary affect to address affective aging. In particular, many studies employed negative emotion item lists for ambulatory assessments of negative affect. However, frequent self-reports on emotion items within short time intervals might change alertness towards and perception of one’s emotional experiences. From an item-response-theoretic point of view, this might impair the stability of item functioning in terms of item discrimination between levels of affectivity and item severity (difficulty). Thus, we examined measurement invariance of negative emotion items commonly used for ambulatory assessments of negative affect. Ambulatory assessments from the EMIL study, obtained over seven consecutive days at six occasions per day from 123 young-old (aged 66-69) and 47 old-old (86-89) adults, were analyzed. Respondents self-reported on 13 negative emotion items, using a 0-100 slider to express the degree to which they felt the respective emotion. We ran multilevel structural equation models with Bayes estimation to analyze variability of negative affect factor loadings, item intercepts, and measurement error variances across repeated measures, thus checking for metric, scalar, and strict factorial invariance. For all sets of parameters, the findings do not strongly support measurement invariance, but point at partial invariance for item subsets. Taking on literature suggesting that criteria for invariance testing should not be too restrictive to meet pragmatic measurement equivalence requirements, further analyses and our conclusions focus on strategies that might allow for acceptable degrees of differential item functioning, enabling reliable analyses of intraindividual short-term variability in negative affect.

MEASUREMENT OF CENTRE OF PRESSURE USING THE WII BALANCE BOARD IN OLDER ADULTS WITH SIMULATED VISUAL IMPAIRMENT

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Postural stability is a complex skill dependent upon the coordination of motor, sensory and cognitive systems. The purpose of this project was therefore to explore how older adults’ balance performance is impacted by increased cognitive load, hearing loss, and simulated vision loss. Twenty-eight older adults between the ages of 50 and 93 years (M = 73.86, SD = 10.43) were tested. Participants underwent standard sensory acuity and cognitive functioning tests. The balance trials varied as a function of cognitive load and visual challenge resulting in five conditions: (1) eyes closed, (2) normal vision clear goggles (NV) (3) simulated low vision (20/80) goggles (LV) (4) LV and math task, (5) NV and math task. Postural stability was assessed with three key center of pressure parameters: total path length (TPL), anterior-posterior amplitude (APA) and medial-lateral amplitude (MLA). A mixed-model ANOVA using hearing acuity as a covariate revealed significant effects of complexity in sway amplitude: (APA: p < .017; MLA: p < .020), while TPL approached significance (p < .074). T-tests revealed significant (p < .05) decreases in balance performance across all 3 centre of pressure parameters when comparing single task NV to dual-task NV, NV vs. eyes closed and single task NV vs. LV dual-task. There were significant positive correlations between hearing acuity and balance (MLA) under single task NV (r = .491) and LV conditions (r = .497). Results suggest the attentional demands from increased cognitive load and sensory loss lead to decreases in older adults’ single- and dual-task balance performance.

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ATTITUDES AND PERCEPTIONS TOWARD TECHNOLOGY

ADAPTING TRAINING AND USE OF AN APPLICATION FOR COGNITIVELY IMPAIRED OLDER ADULTS AMIDST COVID-19

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