

$\chi^2(1) = 4.3, p < .05$. The odds of failing the 4-item AST was 2.3 times higher if patients identified as Hispanic/Latino. Further, patients identifying as bilingual were even more likely to fail the 4-item AST, $\chi^2(1) = 4.5, p < .05$. The odds of failing the 4-item AST was 3.0 times higher if patients were bilingual. There were no ethnicity or bilingual group differences in AST failure when examining performance on the 3-item AST. Neither age nor gender were a significant predictor of failure on the 3-item or 4-item AST.

Conclusions: Results suggest that the month item on the AST does not function consistently across Hispanic/Latino and bilingual youth. It cannot be presumed to be 'automatic' as a significant number of Hispanic/Latino and/or bilingual patients were unable to complete the month item, but with otherwise intact performance on the first three items.

Administering only the first three items on the AST appears to be a more culturally sensitive alternative given the increased odds of 4-item failure in Hispanic/Latino and bilingual youth. Additional research is needed to explore the predictive validity of the AST as a PVT in varying ethnic, culturally, linguistically, and socioeconomically diverse mTBI pediatric populations.

Categories: Concussion/Mild TBI (Child)

Keyword 1: performance validity

Keyword 2: concussion/ mild traumatic brain injury

Keyword 3: diversity

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Coffee Break

10:30 - 10:45am

Saturday, 4th February, 2023

Exhibit Hall - Town & Country Ballroom A

Symposium 14: Patterns of Learning Performance on List Learning Tasks: Do They Mitigate Gender Differences in Memory?

10:45am - 12:10pm
Saturday, 4th February, 2023
Pacific Ballroom A

Chair

Julie Suhr
Ohio University, Athens, USA

Discussant

Dustin Hammers
Indiana University School of Medicine,
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Summary Abstract:

Women tend to perform better than men on episodic verbal memory tests across the age span, which may contribute to gender-related disparities in diagnosis of Mild Cognitive Impairment and dementia. Patterns of learning performance may be better indicators of potential memory problems and address gender differences. The serial position effect, specifically a J-curve (reduced primacy relative to recency), is predictive of dementia, but few studies have examined gender differences in serial position. Learning ratio (LR) is a recently developed calculation for the extent to which an individual benefits from repeated exposure to a word list. LR has shown strong relationships to memory performance and memory impairment. Gender differences on LR have been inconsistently identified. Whether or not men and women show differential relationships of serial position or LR to other memory indicators, however, has not been examined. In the four papers within this symposium, we examine the relationship of serial position and LR to memory outcomes in four samples of older adults, with a focus on whether gender moderates these relationships. We also examine the relationship of memory process variables to cortisol. The first two papers used the RBANS. Alexander et al. found that, within a sample of 203 healthy older adults (133 women) with no diagnosis of MCI or dementia, men and women did not differ on LR and there was no differential prediction for LR by gender with delayed memory variables. Do and colleagues

demonstrated that, within a sample of 338 older adults (228 women) with no diagnosis of MCI or dementia, men and women did not differ in primacy, but men did worse on recency. While 23% of the sample showed a J-curve pattern, this did not differ by gender, and the pattern was highly predictive of memory performance for both men and women. Thus, at least for the RBANS, these two studies suggest LR and primacy avoid gender confounds seen in traditional memory measures.

The last two papers included assessment of cortisol. Lambertus et al. found that, in a sample of 60 older adults, 26 of whom were caregivers for persons with dementia, caregivers performed worse on recency, but not primacy. They also reported more stress but were not different in hair cortisol concentration. Within the full sample, perceived stress was related to recency, but not primacy; hair cortisol was not related to either perceived stress or primacy/recency. Finally, Pizzonia and colleagues report AVLT learning process findings from a sample of 100 healthy older adults (44 men). They found that women were better on both LR and primacy, but not recency. However, LR and primacy were not differentially related to memory outcomes in men and women, although there were differential relationships of recency to AVLT. Potential gender moderation of relationships between cortisol and LR/primacy performance were also observed. Overall, findings suggest that there may be gender differences in AVLT-related learning process tests, but that their relationship to memory outcome variables may be similar across genders. Implications of these findings for assessment will be discussed.

Keyword 1: aging (normal)

Keyword 2: learning

Keyword 3: memory: normal

1 Examining Gender Invariance in Repeatable Battery for the Assessment of Neuropsychological Status Learning Ratio

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Objective: Process-based measures of verbal learning, such as the recently described learning ratio (LR; Hammers et al., 2022) may add valuable data to neuropsychological assessment. Women tend to have higher episodic verbal memory ability compared to men at all ages, including older adulthood (Golchert et al., 2019; Maitland et al., 2004). However, it is unclear whether gender is related to the process of learning, as quantified through measures of learning slope and ratio. To date only one study has examined this, with Hammers et al. (2021) finding no gender differences on LR in the Repeatable Battery for the Assessment of Neuropsychological Status (RBANS); therefore, further study is necessary. We examined whether men and women differed in LR, learning over time (LOT), and raw learning slope (RLS) in a healthy older adult sample, as well as whether these learning process variables predicted delayed memory equally for men and women.

Participants and Methods: 203 cognitively healthy community-dwelling adults aged 50 and above (mean age 67.7; 133 women) were taken from a larger archival database; all were administered the RBANS in the context of other studies. LR, LOT, and RLS were calculated from the List Learning task. We examined whether men and women differed in these learning process measures. We then examined whether process measures differentially predicted performance on list recall and delayed memory index (DMI) of the RBANS for men and women.

Results: Men and women did not differ in age or years of education. After accounting for age and education, there were no gender differences on LR ($p=.455$) or RLS ($p=.502$) but LOT was lower in women ($p=.013$).

LR was equally predictive of list recall across genders ($p<.001$ for LR; $p=.21$ for gender). Correlations between LR and list recall were $r=.65$ ($p<.001$) for men and $r=.56$ ($p<.001$) for women. Both LR ($p<.001$) and gender ($p=.008$) predicted DMI but the interaction was nonsignificant. Correlations between LR and DMI were $r=.52$ for men ($p<.001$) and $r=.46$ for women ($p<.001$).

RLS predicted list recall equally across genders ($p<.001$ for RLS; $p=.07$ for gender; $p=.18$ for interaction). Correlations between RLS and list recall were $r=.43$ for men ($p<.001$) and $r=.23$ for women ($p=.008$). RLS ($p<.001$) and gender ($p=.002$; $p=.19$ for interaction) predicted DMI scores. Correlations between RLS and DMI were $r=.31$ for men ($p=.008$) and $r=.21$ for women ($p=.015$).