Poster Session A

A-46
Painting an Orange Red: Processing Speed Moderates Performance on FAS and Animal Naming in Bilinguals
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Objective: Evidence suggests that bilinguals are confronted with increased task demand on certain neuropsychological tests (e.g., Boston Naming Test, WAIS-IV Backward Digit Span). Many neuropsychological tests are purported to measure unitary constructs of cognitive functioning. Therefore, clinicians working with non-monolingual English speakers need to be sure that a change in task demand does not alter what cognitive domain is actually being measured.

Method: A comprehensive battery of executive functioning (EF) measures were administered to a diverse sample of 66 monolingual and 43 bilingual (20 ESL) healthy adults. All claimed English fluency. EF sub-processes were identified using principal component factor analysis, which derived separate factor solutions from 8 EF variables for each group.

Results: In the monolingual sample, a 4 factor solution was derived: Working Memory/Executive Control, Planning, Processing Speed (PS), and Set Shifting (Cum. Variance = 73% of the variance). In the bilingual sample, the first factor loaded > .500 on 6 of the 8 EF tests; the other factors were PS and Set Shifting (Cum. Variance = 68). PS predominated the 3 factor solution in the bilingual group. Scores on the Symbol Digit Modality Test moderated group differences on the FAS, $F(1, 94) = 6.68, p = .01$, and Animal Naming, $F(1, 102) = 13.32, p = .0004, R^2 = .11$, tests.

Conclusion(s): In bilinguals, there was a considerable amount of overlap in the EF variables across factors. Bilinguals appear to use an approach more reliant on processing speed on measures of phonemic and semantic fluency.

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