Supplemental Material

Laptop-Administered NIH Toolbox and Cogstate Brief Battery in Community-Dwelling Black Adults: Unexpected Pattern of Cognitive Performance between MCI and Healthy Controls

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Table S1. Sample description of performance on assessments included in the NACC Universal Data Set.

|  |  |  |  |
| --- | --- | --- | --- |
|   | Healthy Control (n = 61) |  | MCI (n = 43) |
| Variable | Mean | SD |  | Mean | SD |
| MMSE | 28.86 | 1.03 |  | 27.50 | 1.53 |
| WMS-IV logical Memory (learning) | 13.60 | 3.11 |  | 9.40 | 3.15 |
| WMS-IV Logical Memory (delayed recall) | 12.31 | 2.91 |  | 7.23 | 3.11 |
| WAIS-IV Digit Span Forward (# correct trials) | 8.10 | 1.96 |  | 7.07 | 2.16 |
| WAIS-IV Digit Span Forward (length) | 6.55 | 1.11 |  | 6.03 | 1.25 |
| WAIS-IV Digit Span backward (# correct trials) | 6.57 | 1.63 |  | 4.97 | 1.65 |
| WAIS-IV Digit Span backward (length) | 4.90 | 1.01 |  | 3.90 | 1.03 |
| Semantic Verbal Fluency (animals) | 19.27 | 4.99 |  | 16.27 | 3.50 |
| Semantic Verbal Fluency (vegetables) | 15.18 | 3.71 |  | 12.88 | 3.40 |
| Trails A (time to completion; seconds) | 35.77 | 11.18 |  | 42.50 | 14.07 |
| Trails A (accuracy) | 0.25 | 0.49 |  | 0.27 | 0.52 |
| Trails B (time to completion in seconds) | 85.20 | 25.99 |  | 179.53 | 164.44 |
| Trails B (accuracy) | 0.34 | 0.64 |  | 1.61 | 2.00 |
| WAIS-IV: Digit-Symbol Coding | 48.10 | 9.06 |  | 38.32 | 7.69 |
| Boston Naming Test | 26.29 | 2.58 |  | 23.83 | 3.63 |
| Stroop Word (T-score) | 39.80 | 9.73 |  | 35.94 | 9.60 |
| Stroop Color (T-score) | 39.74 | 8.63 |  | 35.81 | 7.63 |
| Stroop Color-Word (T-score) | 44.68 | 8.79 |  | 41.14 | 7.07 |
| Stroop Interference (T-score) | 45.07 | 7.64 |  | 42.91 | 6.95 |
| WRAT Reading (standard score) | 105.34 | 7.46 |  | 97.43 | 9.04 |

*Note:* Performance on the standardized tests were used in consensus conference to formulate a diagnosis of mild cognitive impairment (MCI) versus typical performance in healthy control (HC); MMSE = mini-mental status examination; WMS-IV = Wechsler Memory Scale (4th edition); WAIS-IV = Wechsler Adult Intelligence scale (4th edition); WRAT = Wide-Range Achievement Test.

Table S2. Sample description of performance on assessments included in the computerized NIH Toolbox-Cognition and Cogstate Brief Battery.

|  |  |  |  |
| --- | --- | --- | --- |
|   | Healthy Control (n = 61) |  | MCI (n = 43) |
| Variable | Mean | SD |  | Mean | SD |
| NIHTB-CB Dimensional Change Card Sort\* | 58.08 | 14.54 |  | 48.57 | 10.19 |
| NIHTB-CB Flanker Test\* | 52.30 | 7.92 |  | 48.40 | 9.02 |
| NIHTB-CB List Sorting\* | 52.21 | 9.03 |  | 45.24 | 7.06 |
| NIHTB-CB Oral Reading Recognition\* | 56.89 | 6.21 |  | 50.01 | 8.43 |
| NIHTB-CB Pattern Comparison\* | 52.28 | 12.82 |  | 44.63 | 10.78 |
| NIHTB-CB Picture Sequence Memory\* | 47.73 | 13.43 |  | 39.23 | 9.65 |
| NIHTB-CB Picture Vocabulary\* | 57.78 | 8.31 |  | 49.49 | 10.42 |
| CBB Detection accuracy (log) | 1.52 | 0.09 |  | 1.53 | 0.09 |
| CBB Detection RT (log) | 2.59 | 0.10 |  | 2.63 | 0.12 |
| CBB Identification accuracy (log) | 1.43 | 0.13 |  | 1.42 | 0.13 |
| CBB Identification RT (log) | 2.77 | 0.09 |  | 2.80 | 0.09 |
| CBB One Card Learning accuracy (log) | 0.98 | 0.09 |  | 0.92 | 0.08 |
| CBB One Card Learning RT (log) | 3.06 | 0.10 |  | 3.07 | 0.11 |
| CBB One Back accuracy (log) | 1.37 | 0.17 |  | 1.27 | 0.19 |
| CBB One Back RT (log) | 2.94 | 0.10 |  | 3.00 | 0.10 |

*Note:* \* = scores were fully adjusted for age, sex, and education; RT = Reaction time (in milliseconds); NIHTB-CB = NIH Toolbox-cognition; CBB = Cogstate Brief Battery