**Supplemental Material**

**Intraclass Correlation Coefficients**

While the primary analyses used correlation coefficients as the validity metric of choice, the intraclass correlation coefficient (ICC) not only measures the strength of the relationship between two measures but also considers the consistency between measures. Thus, we have included this supplementary analysis of the data to bolster the primary analyses and offer a quantitative measure of consistency via two-way mixed effects models of ICCs.

Analyzing the whole sample, results showed that consistency between ORR and WTAR scores was good (ICC(3,1) = .75, *p* < .001, 95% CI [.69, .80]). As expected, consistency between ORR and Flanker scores (ICC(3,1) = .11, *p* = .04, 95% CI [-.01, .24]) and WTAR and Flanker scores (ICC(3,1) = .12, *p* = .03, 95% CI [.00, .24]). Following the same manner of restricting the analyses to specific cognitive status and racial groups showed the same pattern as the whole sample results (see Table 3). Thus, the ICCs results suggest that ORR and WTAR scores show good consistency, irrespective of cognitive status, racial group, or race-by-diagnosis subgroup. This pattern in the ICCs closely follows the primary results from the Bayesian bivariate correlations, as expected.

Table 3

*Intraclass Correlation Coefficients (Two-way Mixed Effects Models)*

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Whole Sample**  **(*N* = 243)** | **CN**  **(*n =* 130)** | **MCI**  **(*n* = 113)** | | **Black**  **(*n* = 153)** | **White**  **(*n* = 90)** | **Black CN**  **(*n* = 74)** | **White CN**  **(*n* = 56)** | **Black MCI**  **(*n* = 79)** | **White MCI**  **(*n* = 34)** |
| **ORR +**  **WTAR** | *ICC(3,1)* = .75\*\*\*  [.69, .80] | *ICC(3,1)* = .77\*\*\*  [.69, .83] | *ICC(3,1)* = .73\*\*\*  [.63, .81] | | *ICC(3,1)* = .73\*\*\*  [.64, .79] | *ICC(3,1)* = .77\*\*\*  [.67, .84] | *ICC(3,1)* = .75\*\*\*  [.63, .84] | *ICC(3,1)* = .79\*\*\*  [.66, .87] | *ICC(3,1)* = .69\*\*\*  [.56, .79] | *ICC(3,1)* = .76\*\*\*  [.57, .87] |
| **ORR + Flanker** | *ICC(3,1)* = .11\*  [-.01, .24] | *ICC(3,1)* = .00  [-.16, .18] | *ICC(3,1)* = .11  [-.08, .29] | | *ICC(3,1)* = .08  [-.08, .23] | *ICC(3,1)* = .00  [-.21 .21] | *ICC(3,1)* = .00  [-.23, .23] | *ICC(3,1)* = .00  [-.26, .26] | *ICC(3,1)* = .13  [-.10, .34] | *ICC(3,1)* = .00  [-.33, .33] |
| **WTAR + Flanker** | *ICC(3,1)* = .12\*  [.00, .24] | *ICC(3,1)* = .07  [-.11, .24] | *ICC(3,1)* = .07  [-.12, .25] | | *ICC(3,1)* = .09  [-.07, .24] | *ICC(3,1)* = .00  [-.21, .21] | *ICC(3,1)* = .00  [-.23, .23] | *ICC(3,1)* = .00  [-.26, .26] | *ICC(3,1)* = .07  [-.15, .28] | *ICC(3,1)* = .00  [-.33, .33] |
| \* *p* < .05, \*\* *p* < .01, \*\*\* *p* < .001 | | |  |