BISR: gait

Date: 2016-11-12

The table reports the model of type 'aehplus', which include covariates *a*ge, *e*ducation, *h*eight, and binary covariates smoking history, cardiovascular disease, and diabetes.

The table reports relationships between levels, slopes, and residuals between the two processes in a given pair of outcomes. For each index, we report the raw covariances produced by the Mplus estimation routine and the correlations with confidence intevals, computed from the estimated (co)variances using Fisher's transform.

Raw covariance are reported in the form : est(se) pval  
where  
- est is the covariance estimate on the original metric  
- se is the standard error on the original metric  
- pval is the p-value associated with the raw covariance

Computed correlations are reported in the form: est(low, high) star  
where  
- est is the correlation coefficient computed from raw (co)variances using Fisher transfrom  
- low and high are the 95% confidence intervals associated with the computed correlations  
- star is significance indicator associated with corresponding covariance estimate, with ., \*, \*\*, and \*\*\* indicating significance at .10, .05, .01, and .001 alpha levels, respectively

Note: cases in which restricted (co)variances or insufficient decimals prevent the computation of correlations are marked by ---

# male

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| domain | study | physical | cognitive |  | Cov(Levels) | Corr(Levels) | Cov(Slopes) | Corr(Slopes) | Cov(Residuals) | Corr(Residuals) |
| attention | map | grip | digit\_f | 351 | 1.36(1.60), =.40 | .06(-.04, .17) | -.02( .09), =.86 | -.07(-.17, .03) | .40( .34), =.25 | .06(-.05, .16) |
| attention | octo | grip | digit\_f | 139 | -.29( .26), =.27 | -.15(-.31, .01) | .00( .01), =.50 | .23( .07, .38) | -.07( .06), =.30 | -.07(-.24, .09) |
| attention | satsa | grip | digit\_f | 299 | .84( .66), =.20 | .18( .06, .28) | .00( .00), =.70 | --- | .16( .23), =.47 | .03(-.08, .15) |
| attention | hrs | grip | serial7 | 3288 | .82( .21), <.01 \*\*\* | .16( .12, .19)\*\*\* | .02( .01), <.01 \*\* | .31( .28, .34)\*\* | -.17( .12), =.17 | -.04(-.07,-.00) |
| episodic memory | map | grip | bstory\_de | 351 | 2.48(1.81), =.17 | .12( .02, .22) | -.09( .13), =.49 | -.45(-.53,-.36) | .39( .43), =.36 | .04(-.06, .14) |
| episodic memory | satsa | grip | information | 300 | 4.48(7.53), =.55 | .14( .03, .25) | .02( .04), =.59 | .56( .48, .63) | 1.04(2.71), =.70 | .04(-.08, .15) |
| episodic memory | map | grip | logic\_de | 351 | -1.43(4.18), =.73 | -.03(-.13, .08) | -.26( .22), =.23 | -.25(-.34,-.15) | 1.09( .62), =.08 . | .08(-.02, .18). |
| episodic memory | eas | grip | logic\_tot | 72 | -4.23(11.27), =.71 | -.15(-.37, .08) | -.25( .82), =.76 | -.46(-.63,-.26) | 2.49(2.79), =.37 | .16(-.07, .38) |
| episodic memory | ilse | grip | waisgeneral | 252 | 7.82(6.86), =.26 | .12(-.00, .24) | .01( .06), =.82 | .22( .10, .34) | -.87(1.91), =.65 | -.04(-.16, .09) |
| executive function | eas | grip | trailsb | 72 | 61.76(90.45), =.49 | .31( .08, .50) | 1.81(7.92), =.82 | .62( .45, .74) | -14.59(35.12), =.68 | -.08(-.31, .15) |
| fluency | eas | grip | categories | 72 | -8.80(13.33), =.51 | -.22(-.43, .01) | -.37( .82), =.65 | -.60(-.73,-.43) | 1.81(2.72), =.51 | .09(-.14, .32) |
| fluency | map | grip | categories | 351 | 8.73(7.63), =.25 | .08(-.02, .19) | .20( .38), =.60 | .18( .08, .28) | .53(1.25), =.67 | .02(-.08, .12) |
| fluency | eas | grip | fas | 72 | -15.30(17.41), =.38 | -.32(-.51,-.10) | -.22( .88), =.80 | -.48(-.64,-.28) | -.58(4.16), =.89 | -.03(-.26, .21) |
| fluency | ilse | grip | fluency | 252 | 9.48(13.28), =.47 | .07(-.05, .20) | .04( .15), =.80 | .19( .07, .31) | 13.29(5.00), =.01 \*\* | .21( .09, .32)\*\* |
| fluid reasoning | satsa | grip | analogies | 300 | 1.15(3.39), =.73 | .08(-.03, .20) | .01( .02), =.79 | .50( .41, .58) | 3.61(2.34), =.12 | .14( .03, .25) |
| fluid reasoning | eas | grip | block | 72 | 5.53(15.77), =.73 | .16(-.07, .38) | .23(1.01), =.82 | .78( .67, .86) | .10(3.87), =.98 | .01(-.23, .24) |
| fluid reasoning | octo | grip | block | 139 | 3.62(1.22), <.01 \*\* | .30( .14, .45)\*\* | -.01( .03), =.74 | -.25(-.40,-.08) | .52( .24), =.03 \* | .14(-.03, .30)\* |
| fluid reasoning | satsa | grip | block | 298 | 12.35(3.77), <.01 \*\*\* | .36( .26, .46)\*\*\* | .02( .01), =.09 . | .66( .59, .72). | 2.10( .87), =.01 \* | .11(-.00, .22)\* |
| fluid reasoning | map | grip | matrices | 351 | 4.88(2.38), =.04 \* | .18( .08, .28)\* | .28( .13), =.03 \* | .61( .54, .67)\* | -.06( .58), =.92 | -.01(-.11, .10) |
| fluid reasoning | lasa | grip | raven | 800 | 2.65( .89), <.01 \*\* | .17( .10, .23)\*\* | .02( .01), =.02 \* | .92( .91, .93)\* | .70( .31), =.03 \* | .08( .01, .14)\* |
| fluid reasoning | ilse | grip | spatial\_ab | 252 | 18.41(9.77), =.06 . | .18( .06, .30). | .17( .14), =.22 | .41( .30, .51) | -1.59(2.61), =.54 | -.04(-.17, .08) |
| mental status | nuage | grip | mmms | 847 | 5.49(2.04), =.01 \*\* | .13( .06, .20)\*\* | .33( .23), =.16 | .28( .22, .34) | -.71( .47), =.13 | -.04(-.10, .03) |
| mental status | eas | grip | mmse | 72 | -.09(2.03), =.96 | -.03(-.26, .20) | .06( .15), =.66 | .64( .48, .76) | .07( .42), =.87 | .02(-.21, .25) |
| mental status | map | grip | mmse | 351 | 4.58(2.18), =.04 \* | .19( .08, .28)\* | .25( .20), =.21 | .33( .23, .42) | .16( .42), =.71 | .02(-.09, .12) |
| mental status | nuage | grip | mmse | 847 | 2.28( .74), <.01 \*\* | .18( .12, .25)\*\* | .13( .11), =.23 | .30( .24, .36) | .02( .22), =.92 | .00(-.06, .07) |
| mental status | satsa | grip | mmse | 300 | 2.19(2.13), =.30 | .31( .20, .41) | .01( .02), =.59 | .46( .37, .55) | .74(1.33), =.58 | .05(-.06, .16) |
| mental status | hrs | grip | tics | 507 | .67(1.48), =.65 | .13( .04, .21) | .06( .06), =.31 | .11( .02, .20) | -1.11( .97), =.25 | -.10(-.18,-.01) |
| perceptual speed | lasa | grip | letter | 800 | 3.28(1.69), =.05 . | .10( .03, .17). | .03( .02), =.09 . | .60( .55, .64). | .96( .39), =.01 \* | .09( .02, .16)\* |
| perceptual speed | map | grip | num\_comp | 351 | 7.35(5.94), =.22 | .08(-.02, .18) | .03( .34), =.93 | .03(-.08, .13) | -.18( .97), =.85 | -.01(-.11, .10) |
| perceptual speed | eas | grip | symbol | 72 | -5.88(15.44), =.70 | -.13(-.35, .10) | .82(1.08), =.45 | .70( .56, .80) | 1.46(3.34), =.66 | .07(-.16, .30) |
| perceptual speed | ilse | grip | symbol | 252 | -14.22(16.99), =.40 | -.08(-.20, .04) | -.04( .20), =.85 | -.07(-.19, .06) | 3.40(4.14), =.41 | .07(-.06, .19) |
| perceptual speed | map | grip | symbol | 351 | 21.22(9.18), =.02 \* | .17( .07, .27)\* | .53( .48), =.28 | .40( .30, .48) | .95(1.22), =.43 | .04(-.07, .14) |
| perceptual speed | octo | grip | symbol | 138 | 4.32(1.88), =.02 \* | .24( .07, .39)\* | -.01( .06), =.85 | -.08(-.24, .09) | .76( .46), =.09 . | .15(-.02, .31). |
| perceptual speed | satsa | grip | symbol | 299 | 14.81(5.05), <.01 \*\* | .28( .18, .39)\*\* | -.00( .02), =.91 | -.04(-.15, .08) | 3.38(1.36), =.01 \* | .12( .00, .23)\* |
| semantic memory | eas | grip | bnt | 72 | -1.26(4.31), =.77 | -.18(-.40, .05) | -.01( .24), =.98 | -.06(-.29, .18) | -.02( .78), =.98 | -.00(-.24, .23) |
| semantic memory | map | grip | bnt | 351 | 4.31(1.42), <.01 \*\* | .27( .17, .36)\*\* | .02( .05), =.69 | .15( .04, .25) | .05( .16), =.77 | .01(-.09, .12) |
| semantic memory | map | grip | nart | 351 | 1.44(1.76), =.41 | .05(-.05, .16) | .06( .07), =.34 | .34( .25, .43) | -.04( .26), =.88 | -.01(-.11, .10) |
| semantic memory | satsa | grip | synonyms | 300 | 6.52(4.91), =.18 | .27( .17, .38) | -.00( .02), =.90 | -.19(-.30,-.08) | -.71(1.82), =.70 | -.03(-.15, .08) |
| semantic memory | eas | grip | waisvocab | 72 | -4.11(16.87), =.81 | -.12(-.34, .12) | .38( .90), =.68 | .69( .54, .79) | -1.59(5.91), =.79 | -.06(-.29, .17) |
| semantic memory | elsa | grip | word\_de | 3091 | .34( .26), =.20 | .05( .01, .08) | -.00( .00), =.18 | -.43(-.46,-.40) | .12( .13), =.33 | .02(-.01, .06) |
| semantic memory | elsa | grip | word\_de | 3091 | .34( .26), =.20 | .05( .01, .08) | -.00( .00), =.18 | -.43(-.46,-.40) | .12( .13), =.33 | .02(-.01, .06) |
| semantic memory | hrs | grip | word\_de | 3290 | 1.04( .23), <.01 \*\*\* | .15( .12, .18)\*\*\* | .00( .01), =.39 | .29( .26, .32) | .14( .12), =.22 | .03(-.01, .06) |
| semantic memory | map | grip | word\_de | 351 | 1.42(1.83), =.44 | .06(-.04, .17) | .02( .12), =.87 | .08(-.02, .18) | -.15( .33), =.64 | -.02(-.12, .08) |
| semantic memory | map | grip | word\_rec | 351 | 1.59(1.16), =.17 | .11( .00, .21) | .02( .07), =.75 | .06(-.04, .17) | -.06( .23), =.81 | -.01(-.12, .09) |
| short-term memory | map | grip | bstory\_im | 351 | 2.01(1.58), =.20 | .12( .02, .22) | -.14( .11), =.23 | -.50(-.58,-.42) | .20( .34), =.55 | .02(-.08, .13) |
| short-term memory | eas | grip | digit\_tot | 72 | 2.33(5.34), =.66 | .14(-.10, .36) | -.06( .28), =.83 | -.23(-.44, .00) | -.02( .92), =.98 | -.00(-.24, .23) |
| short-term memory | map | grip | logic\_im | 351 | -4.02(3.71), =.28 | -.09(-.19, .01) | -.44( .13), <.01 \*\*\* | -.76(-.80,-.72)\*\*\* | .85( .62), =.17 | .06(-.05, .16) |
| short-term memory | octo | grip | prose\_im | 139 | 2.38( .78), <.01 \*\* | .35( .20, .49)\*\* | -.01( .05), =.79 | -.37(-.51,-.22) | .35( .25), =.16 | .14(-.03, .30) |
| short-term memory | elsa | grip | word\_im | 3091 | .13( .23), =.57 | .02(-.01, .06) | -.00( .00), =.14 | -.41(-.43,-.38) | .29( .12), =.02 \* | .06( .02, .09)\* |
| short-term memory | hrs | grip | word\_im | 3290 | .81( .20), <.01 \*\*\* | .14( .11, .17)\*\*\* | .00( .00), =.85 | .08( .05, .12) | .25( .10), =.01 \* | .06( .02, .09)\* |
| short-term memory | lasa | grip | word\_im | 800 | 1.76(1.54), =.25 | .07( .00, .14) | .00( .01), =.84 | .17( .11, .24) | 2.25( .53), <.01 \*\*\* | .14( .07, .20)\*\*\* |
| short-term memory | map | grip | word\_im | 351 | 4.08(3.29), =.21 | .11( .00, .21) | -.03( .22), =.90 | -.06(-.16, .05) | .83( .76), =.27 | .06(-.05, .16) |
| verbal comprehension | map | grip | ideas | 351 | 1.08( .60), =.07 . | .18( .08, .28). | .08( .06), =.16 | .29( .20, .39) | .02( .10), =.82 | .01(-.10, .11) |
| visual discrimination | map | grip | line | 351 | 3.49(2.22), =.12 | .11( .00, .21) | .01( .16), =.92 | .04(-.07, .14) | -.34( .53), =.53 | -.03(-.14, .07) |
| visual discrimination | ilse | grip | piccomp | 252 | 11.62(6.45), =.07 . | .22( .10, .34). | .08( .10), =.43 | .43( .32, .52) | 4.11(2.57), =.11 | .16( .04, .28) |
| working memory | map | grip | digit\_b | 351 | -.45(1.87), =.81 | -.02(-.13, .08) | .06( .11), =.55 | .18( .08, .28) | 1.21( .33), <.01 \*\*\* | .17( .06, .27)\*\*\* |
| working memory | octo | grip | digit\_b | 139 | .12( .23), =.60 | .06(-.11, .22) | .00( .01), =.68 | .19( .03, .35) | -.16( .10), =.10 . | -.13(-.29, .04). |
| working memory | satsa | grip | digit\_b | 299 | 1.43( .64), =.03 \* | .29( .19, .40)\* | .00( .00), =.71 | --- | -.14( .26), =.58 | -.03(-.14, .09) |
| working memory | map | grip | digit\_o | 351 | 1.37(1.48), =.35 | .09(-.02, .19) | .02( .09), =.84 | .12( .02, .22) | .01( .29), =.98 | .00(-.10, .11) |
| NA | eas | grip | NA | 72 | -4.90(6.49), =.45 | -.31(-.51,-.09) | -.04( .60), =.95 | -.16(-.38, .08) | 1.26(2.19), =.56 | .09(-.14, .32) |

# female

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| domain | study | physical | cognitive |  | Cov(Levels) | Corr(Levels) | Cov(Slopes) | Corr(Slopes) | Cov(Residuals) | Corr(Residuals) |
| attention | map | grip | digit\_f | 1010 | .11( .63), =.86 | .01(-.05, .07) | .02( .05), =.59 | .22( .16, .28) | .20( .15), =.19 | .04(-.03, .10) |
| attention | octo | grip | digit\_f | 275 | -.07( .12), =.53 | -.06(-.17, .06) | .00( .00), =.70 | .11(-.01, .23) | .04( .04), =.37 | .05(-.07, .16) |
| attention | satsa | grip | digit\_f | 409 | -.10( .33), =.77 | -.03(-.13, .07) | .00( .00), =.45 | --- | .11( .11), =.32 | .03(-.07, .13) |
| attention | hrs | grip | serial7 | 4604 | .13( .13), =.32 | .03(-.00, .06) | .01( .00), <.01 \*\*\* | .47( .44, .49)\*\*\* | -.08( .06), =.18 | -.03(-.06, .00) |
| episodic memory | map | grip | bstory\_de | 1010 | -.06( .61), =.92 | -.01(-.07, .06) | .06( .06), =.36 | .24( .18, .30) | .05( .19), =.78 | .01(-.05, .07) |
| episodic memory | satsa | grip | information | 411 | 2.53(2.40), =.29 | .10( .00, .20) | .03( .01), =.03 \* | .64( .58, .70)\* | .87( .57), =.13 | .06(-.04, .15) |
| episodic memory | map | grip | logic\_de | 1010 | -.22(1.33), =.87 | -.01(-.07, .05) | .20( .10), =.05 \* | .43( .38, .48)\* | .09( .30), =.78 | .01(-.05, .07) |
| episodic memory | eas | grip | logic\_tot | 150 | 1.47(4.61), =.75 | .06(-.10, .22) | -.03( .19), =.86 | -.21(-.35,-.05) | .53( .87), =.54 | .06(-.10, .22) |
| episodic memory | ilse | grip | waisgeneral | 225 | 2.20(7.03), =.75 | .03(-.10, .16) | .11( .10), =.27 | .43( .31, .53) | -1.78(1.78), =.32 | -.08(-.21, .05) |
| executive function | eas | grip | trailsb | 150 | -75.27(41.82), =.07 . | -.33(-.47,-.18). | -.63(1.80), =.73 | -.69(-.77,-.60) | 12.47(8.16), =.13 | .13(-.03, .29) |
| fluency | eas | grip | categories | 150 | 5.04(5.90), =.39 | .14(-.03, .29) | .11( .22), =.61 | .27( .11, .41) | -.38( .68), =.58 | -.04(-.20, .12) |
| fluency | map | grip | categories | 1010 | 3.97(2.77), =.15 | .06(-.00, .12) | .24( .19), =.19 | .25( .19, .31) | .71( .58), =.22 | .03(-.03, .10) |
| fluency | eas | grip | fas | 150 | 8.63(9.23), =.35 | .17( .01, .32) | -.08( .19), =.67 | -.33(-.47,-.18) | .93(1.07), =.38 | .08(-.08, .23) |
| fluency | ilse | grip | fluency | 225 | 13.64(14.92), =.36 | .10(-.03, .23) | .24( .27), =.38 | .57( .48, .66) | 9.98(5.52), =.07 . | .15( .02, .28). |
| fluid reasoning | satsa | grip | analogies | 410 | -.07( .97), =.94 | -.01(-.10, .09) | .01( .00), =.20 | .36( .28, .44) | 1.22( .43), <.01 \*\* | .12( .02, .21)\*\* |
| fluid reasoning | eas | grip | block | 150 | 4.48(5.49), =.41 | .13(-.03, .29) | -.04( .12), =.72 | -.31(-.45,-.16) | -.06(1.18), =.96 | -.01(-.17, .15) |
| fluid reasoning | octo | grip | block | 274 | 3.10( .84), <.01 \*\*\* | .31( .20, .41)\*\*\* | .05( .02), <.01 \*\* | .76( .71, .81)\*\* | .18( .19), =.35 | .05(-.07, .17) |
| fluid reasoning | satsa | grip | block | 409 | 4.25(2.11), =.04 \* | .19( .10, .29)\* | .00( .01), =.89 | .04(-.06, .14) | 1.73( .61), <.01 \*\* | .11( .01, .21)\*\* |
| fluid reasoning | map | grip | matrices | 1010 | 1.56( .90), =.08 . | .09( .03, .15). | .05( .07), =.43 | .39( .34, .44) | -.04( .26), =.87 | -.01(-.07, .06) |
| fluid reasoning | lasa | grip | raven | 782 | .29( .66), =.66 | .03(-.04, .10) | .00( .01), =.77 | .33( .27, .39) | .09( .24), =.70 | .01(-.06, .08) |
| fluid reasoning | ilse | grip | spatial\_ab | 225 | .80(11.07), =.94 | .01(-.12, .14) | .08( .16), =.59 | .37( .26, .48) | -.37(3.83), =.92 | -.01(-.14, .12) |
| mental status | nuage | grip | mmms | 934 | 1.64(1.87), =.38 | .04(-.02, .11) | .40( .28), =.15 | .28( .22, .34) | .39( .41), =.34 | .02(-.04, .09) |
| mental status | eas | grip | mmse | 150 | 1.20( .91), =.19 | .24( .09, .39) | -.01( .03), =.73 | -.38(-.51,-.24) | -.01( .19), =.96 | -.00(-.17, .16) |
| mental status | map | grip | mmse | 1010 | -.00( .55), =.99 | -.00(-.06, .06) | .13( .07), =.06 . | .54( .49, .58). | .12( .15), =.41 | .02(-.04, .08) |
| mental status | nuage | grip | mmse | 934 | .86( .65), =.18 | .08( .02, .14) | .05( .10), =.60 | .16( .10, .22) | -.02( .19), =.92 | -.00(-.07, .06) |
| mental status | satsa | grip | mmse | 412 | .10( .64), =.88 | .03(-.07, .13) | .01( .01), =.34 | .27( .18, .36) | 1.07( .30), <.01 \*\*\* | .13( .03, .22)\*\*\* |
| mental status | hrs | grip | tics | 641 | 2.48(1.40), =.08 . | .16( .08, .24). | .10( .06), =.08 . | .16( .08, .23). | -.40( .46), =.39 | -.04(-.12, .04) |
| perceptual speed | lasa | grip | letter | 782 | .70(1.29), =.59 | .03(-.04, .10) | .01( .01), =.40 | .41( .35, .47) | .65( .23), <.01 \*\* | .08( .01, .15)\*\* |
| perceptual speed | map | grip | num\_comp | 1010 | 2.42(2.53), =.34 | .04(-.02, .10) | .17( .14), =.22 | .31( .26, .37) | .23( .45), =.61 | .01(-.05, .07) |
| perceptual speed | ilse | grip | symbol | 225 | -48.56(20.52), =.02 \* | -.25(-.37,-.12)\* | .12( .17), =.48 | .21( .08, .33) | -.64(3.70), =.86 | -.01(-.14, .12) |
| perceptual speed | map | grip | symbol | 1010 | 6.24(3.52), =.08 . | .08( .02, .14). | -.06( .21), =.79 | -.06(-.12,-.00) | .04( .61), =.95 | .00(-.06, .06) |
| perceptual speed | octo | grip | symbol | 271 | 2.62(1.18), =.03 \* | .18( .06, .29)\* | .01( .02), =.59 | .16( .04, .27) | .72( .32), =.02 \* | .12( .00, .24)\* |
| perceptual speed | satsa | grip | symbol | 409 | 7.15(3.22), =.03 \* | .23( .14, .32)\* | .02( .01), =.25 | .40( .32, .48) | 2.64( .95), <.01 \*\* | .11( .01, .20)\*\* |
| semantic memory | eas | grip | bnt | 150 | 2.71(1.56), =.08 . | .33( .18, .46). | .02( .08), =.80 | .25( .10, .40) | .03( .22), =.89 | .01(-.15, .17) |
| semantic memory | map | grip | bnt | 1010 | .90( .49), =.07 . | .08( .02, .14). | .02( .03), =.62 | .09( .03, .15) | -.07( .08), =.37 | -.02(-.09, .04) |
| semantic memory | map | grip | nart | 1010 | -.09( .72), =.90 | -.01(-.07, .06) | -.00( .03), =.97 | -.01(-.07, .05) | -.02( .11), =.88 | -.00(-.07, .06) |
| semantic memory | satsa | grip | synonyms | 410 | 1.67(1.43), =.24 | .10( .01, .20) | .00( .01), =.47 | .28( .18, .36) | .63( .38), =.10 . | .06(-.03, .16). |
| semantic memory | eas | grip | waisvocab | 150 | 6.83(7.03), =.33 | .15(-.01, .30) | .11( .28), =.71 | .58( .46, .68) | -1.10(1.24), =.38 | -.08(-.24, .08) |
| semantic memory | elsa | grip | word\_de | 3511 | .68( .17), <.01 \*\*\* | .13( .10, .17)\*\*\* | .00( .00), =.97 | .00(-.03, .03) | .09( .09), =.30 | .02(-.01, .06) |
| semantic memory | elsa | grip | word\_de | 3511 | .68( .17), <.01 \*\*\* | .13( .10, .17)\*\*\* | .00( .00), =.97 | .00(-.03, .03) | .09( .09), =.30 | .02(-.01, .06) |
| semantic memory | hrs | grip | word\_de | 4612 | .49( .15), <.01 \*\*\* | .09( .06, .12)\*\*\* | .00( .00), =.92 | .00(-.03, .03) | .17( .07), =.01 \* | .05( .02, .08)\* |
| semantic memory | map | grip | word\_de | 1010 | 2.81( .68), <.01 \*\*\* | .17( .11, .23)\*\*\* | .05( .04), =.25 | .25( .19, .30) | .00( .16), =.97 | .00(-.06, .06) |
| short-term memory | map | grip | bstory\_im | 1010 | .03( .02), =.13 | .08( .02, .14) | -.00( .00), =.40 | --- | -.01( .01), =.12 | -.04(-.10, .02) |
| short-term memory | eas | grip | digit\_tot | 150 | -1.79(1.83), =.33 | -.15(-.30, .01) | -.04( .08), =.64 | -.39(-.52,-.25) | .09( .33), =.78 | .03(-.14, .18) |
| short-term memory | map | grip | logic\_im | 1010 | -.86(1.32), =.51 | -.03(-.09, .03) | .14( .09), =.12 | .34( .28, .39) | -.17( .31), =.59 | -.02(-.08, .05) |
| short-term memory | octo | grip | prose\_im | 272 | .68( .38), =.08 . | .14( .02, .25). | .01( .01), =.31 | .36( .25, .46) | .14( .16), =.39 | .06(-.06, .18) |
| short-term memory | elsa | grip | word\_im | 3511 | .51( .16), <.01 \*\*\* | .12( .09, .15)\*\*\* | .00( .00), =.91 | .00(-.03, .03) | .06( .08), =.49 | .02(-.02, .05) |
| short-term memory | hrs | grip | word\_im | 4612 | .58( .12), <.01 \*\*\* | .14( .12, .17)\*\*\* | .00( .00), =.46 | .28( .25, .30) | .09( .06), =.14 | .03(-.00, .06) |
| short-term memory | lasa | grip | word\_im | 782 | 1.75(1.09), =.11 | .11( .04, .18) | .00( .01), =.90 | .15( .09, .22) | 1.68( .38), <.01 \*\*\* | .12( .05, .19)\*\*\* |
| short-term memory | map | grip | word\_im | 1010 | 5.26(1.32), <.01 \*\*\* | .17( .11, .23)\*\*\* | .14( .10), =.18 | .26( .20, .32) | .36( .31), =.24 | .03(-.03, .09) |
| verbal comprehension | map | grip | ideas | 1010 | -.02( .21), =.92 | -.01(-.07, .06) | .01( .02), =.71 | .13( .06, .19) | .04( .05), =.45 | .02(-.04, .08) |
| visual discrimination | map | grip | line | 1010 | 1.48(1.08), =.17 | .07( .01, .13) | .06( .07), =.39 | .72( .69, .75) | .21( .22), =.34 | .02(-.04, .09) |
| visual discrimination | ilse | grip | piccomp | 225 | 2.07(6.71), =.76 | .04(-.09, .17) | .07( .12), =.57 | .26( .13, .38) | .36(2.76), =.90 | .01(-.12, .14) |
| working memory | map | grip | digit\_b | 1010 | .08( .02), <.01 \*\*\* | .15( .09, .21)\*\*\* | .00( .00), =.10 | .51( .47, .56) | -.01( .01), =.11 | -.04(-.11, .02) |
| working memory | octo | grip | digit\_b | 275 | -.00( .13), =.98 | -.00(-.12, .12) | -.00( .00), =.40 | -.49(-.57,-.39) | .06( .06), =.35 | .05(-.07, .16) |
| working memory | satsa | grip | digit\_b | 409 | .38( .41), =.36 | .12( .02, .21) | .00( .00), =.34 | .32( .23, .41) | .18( .16), =.27 | .04(-.06, .13) |
| working memory | map | grip | digit\_o | 1010 | .49( .52), =.35 | .05(-.01, .11) | .02( .04), =.57 | .19( .13, .25) | .10( .14), =.49 | .02(-.04, .08) |
| NA | eas | grip | NA | 150 | 2.62(3.41), =.44 | .15(-.01, .30) | .03( .16), =.86 | .15(-.01, .30) | .16( .66), =.81 | .02(-.14, .18) |
| NA | eas | grip | NA | 150 | 15.52(8.40), =.06 . | .31( .16, .45). | .13( .22), =.57 | .66( .56, .74) | -1.39(1.15), =.23 | -.11(-.26, .05) |

# male

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| domain | study | physical | cognitive |  | Corr(Levels) | Corr(Slopes) | Corr(Residuals) |
| attention | map | grip | digit\_f | 351 | --- | --- | --- |
| attention | octo | grip | digit\_f | 139 | -.15( .13), =.24 | .24( .36), =.51 | -.07( .07), =.30 |
| attention | satsa | grip | digit\_f | 299 | .18( .13), =.17 | .35( .87), =.69 | .03( .05), =.47 |
| attention | hrs | grip | serial7 | 3288 | .15( .04), <.01 \*\*\* | .30( .11), =.01 \*\* | -.04( .03), =.17 |
| episodic memory | map | grip | bstory\_de | 351 | --- | --- | --- |
| episodic memory | satsa | grip | information | 300 | --- | --- | --- |
| episodic memory | map | grip | logic\_de | 351 | --- | --- | --- |
| episodic memory | eas | grip | logic\_tot | 72 | -.15( .43), =.72 | -.46(1.40), =.74 | .16( .18), =.38 |
| episodic memory | ilse | grip | waisgeneral | 252 | .12( .11), =.25 | .23(1.11), =.83 | -.04( .08), =.65 |
| executive function | eas | grip | trailsb | 72 | .31( .42), =.47 | .62(2.71), =.82 | -.08( .20), =.68 |
| fluency | eas | grip | categories | 72 | -.22( .32), =.49 | -.60(1.22), =.62 | .09( .14), =.51 |
| fluency | map | grip | categories | 351 | --- | --- | --- |
| fluency | eas | grip | fas | 72 | -.32( .34), =.34 | -.48(1.71), =.78 | -.03( .19), =.89 |
| fluency | ilse | grip | fluency | 252 | .07( .10), =.47 | .19( .76), =.80 | .21( .07), <.01 \*\* |
| fluid reasoning | satsa | grip | analogies | 300 | --- | --- | --- |
| fluid reasoning | eas | grip | block | 72 | .16( .48), =.74 | .79(3.83), =.84 | .00( .19), =.98 |
| fluid reasoning | octo | grip | block | 139 | .30( .09), <.01 \*\*\* | -.25(1.03), =.80 | .14( .06), =.02 \* |
| fluid reasoning | satsa | grip | block | 298 | .36( .09), <.01 \*\*\* | .65( .39), =.10 . | .11( .04), =.01 \* |
| fluid reasoning | map | grip | matrices | 351 | --- | --- | --- |
| fluid reasoning | lasa | grip | raven | 800 | .17( .05), <.01 \*\* | .93( .69), =.18 | .07( .03), =.02 \* |
| fluid reasoning | ilse | grip | spatial\_ab | 252 | .18( .10), =.06 . | .41( .33), =.21 | -.04( .07), =.54 |
| mental status | nuage | grip | mmms | 847 | .13( .05), =.01 \*\* | .28( .21), =.19 | -.04( .02), =.13 |
| mental status | eas | grip | mmse | 72 | -.03( .71), =.96 | .65(1.59), =.68 | .02( .13), =.87 |
| mental status | map | grip | mmse | 351 | --- | --- | --- |
| mental status | nuage | grip | mmse | 847 | .18( .06), <.01 \*\* | .30( .25), =.23 | .00( .03), =.92 |
| mental status | satsa | grip | mmse | 300 | --- | --- | --- |
| mental status | hrs | grip | tics | 507 | --- | --- | --- |
| perceptual speed | lasa | grip | letter | 800 | .10( .05), =.05 \* | .61( .41), =.13 | .09( .03), =.01 \* |
| perceptual speed | map | grip | num\_comp | 351 | --- | --- | --- |
| perceptual speed | eas | grip | symbol | 72 | -.13( .34), =.69 | .70( .87), =.42 | .07( .16), =.66 |
| perceptual speed | ilse | grip | symbol | 252 | -.08( .10), =.41 | -.07( .36), =.85 | .06( .08), =.40 |
| perceptual speed | map | grip | symbol | 351 | --- | --- | --- |
| perceptual speed | octo | grip | symbol | 138 | .24( .10), =.01 \* | -.08( .44), =.86 | .15( .09), =.08 . |
| perceptual speed | satsa | grip | symbol | 299 | .28( .09), <.01 \*\*\* | -.05( .41), =.91 | .12( .05), =.01 \* |
| semantic memory | eas | grip | bnt | 72 | -.18( .61), =.77 | -.06(1.95), =.98 | -.00( .15), =.98 |
| semantic memory | map | grip | bnt | 351 | --- | --- | --- |
| semantic memory | map | grip | nart | 351 | --- | --- | --- |
| semantic memory | satsa | grip | synonyms | 300 | --- | --- | --- |
| semantic memory | eas | grip | waisvocab | 72 | -.12( .48), =.81 | .69(1.87), =.71 | -.06( .22), =.79 |
| semantic memory | elsa | grip | word\_de | 3091 | .05( .04), =.20 | -.48( .42), =.26 | .02( .02), =.33 |
| semantic memory | elsa | grip | word\_de | 3091 | .05( .04), =.20 | -.48( .42), =.26 | .02( .02), =.33 |
| semantic memory | hrs | grip | word\_de | 3290 | .15( .03), <.01 \*\*\* | .28( .35), =.42 | .03( .02), =.22 |
| semantic memory | map | grip | word\_de | 351 | --- | --- | --- |
| semantic memory | map | grip | word\_rec | 351 | --- | --- | --- |
| short-term memory | map | grip | bstory\_im | 351 | --- | --- | --- |
| short-term memory | eas | grip | digit\_tot | 72 | .14( .31), =.66 | -.23( .98), =.81 | -.00( .14), =.98 |
| short-term memory | map | grip | logic\_im | 351 | --- | --- | --- |
| short-term memory | octo | grip | prose\_im | 139 | .35( .10), <.01 \*\*\* | -.38(2.68), =.89 | .14( .09), =.14 |
| short-term memory | elsa | grip | word\_im | 3091 | .02( .04), =.57 | -.42( .34), =.22 | .06( .02), =.02 \* |
| short-term memory | hrs | grip | word\_im | 3290 | .14( .03), <.01 \*\*\* | .08( .40), =.84 | .06( .02), =.01 \* |
| short-term memory | lasa | grip | word\_im | 800 | .07( .06), =.25 | .16( .80), =.84 | .14( .03), <.01 \*\*\* |
| short-term memory | map | grip | word\_im | 351 | --- | --- | --- |
| verbal comprehension | map | grip | ideas | 351 | --- | --- | --- |
| visual discrimination | map | grip | line | 351 | --- | --- | --- |
| visual discrimination | ilse | grip | piccomp | 252 | .22( .12), =.06 . | .43( .48), =.37 | .16( .09), =.09 . |
| working memory | map | grip | digit\_b | 351 | --- | --- | --- |
| working memory | octo | grip | digit\_b | 139 | .06( .11), =.60 | .20( .49), =.69 | -.13( .07), =.08 . |
| working memory | satsa | grip | digit\_b | 299 | .29( .13), =.02 \* | .39(1.05), =.71 | -.03( .05), =.59 |
| working memory | map | grip | digit\_o | 351 | --- | --- | --- |
| NA | eas | grip | NA | 72 | -.31( .40), =.43 | -.16(2.47), =.95 | .09( .16), =.57 |

# female

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| domain | study | physical | cognitive |  | Corr(Levels) | Corr(Slopes) | Corr(Residuals) |
| attention | map | grip | digit\_f | 1010 | --- | --- | --- |
| attention | octo | grip | digit\_f | 275 | -.06( .09), =.53 | .13( .33), =.70 | .04( .05), =.38 |
| attention | satsa | grip | digit\_f | 409 | -.03( .11), =.77 | .58( .84), =.49 | .03( .03), =.32 |
| attention | hrs | grip | serial7 | 4604 | .03( .03), =.32 | .45( .13), <.01 \*\*\* | -.03( .02), =.18 |
| episodic memory | map | grip | bstory\_de | 1010 | --- | --- | --- |
| episodic memory | satsa | grip | information | 411 | --- | --- | --- |
| episodic memory | map | grip | logic\_de | 1010 | --- | --- | --- |
| episodic memory | eas | grip | logic\_tot | 150 | .06( .19), =.75 | -.20(1.14), =.86 | .06( .10), =.54 |
| episodic memory | ilse | grip | waisgeneral | 225 | .03( .09), =.75 | .42( .42), =.32 | -.08( .08), =.31 |
| executive function | eas | grip | trailsb | 150 | -.33( .17), =.05 \* | -.69(2.50), =.78 | .13( .09), =.12 |
| fluency | eas | grip | categories | 150 | .14( .16), =.39 | .27( .51), =.60 | -.04( .07), =.58 |
| fluency | map | grip | categories | 1010 | --- | --- | --- |
| fluency | eas | grip | fas | 150 | .17( .17), =.33 | -.33( .84), =.69 | .08( .09), =.38 |
| fluency | ilse | grip | fluency | 225 | .10( .11), =.35 | .58( .72), =.43 | .15( .08), =.06 . |
| fluid reasoning | satsa | grip | analogies | 410 | --- | --- | --- |
| fluid reasoning | eas | grip | block | 150 | .13( .16), =.40 | -.31( .84), =.71 | -.01( .11), =.96 |
| fluid reasoning | octo | grip | block | 274 | .31( .08), <.01 \*\*\* | .76( .28), =.01 \*\* | .05( .05), =.35 |
| fluid reasoning | satsa | grip | block | 409 | .20( .09), =.03 \* | .05( .38), =.89 | .11( .04), <.01 \*\* |
| fluid reasoning | map | grip | matrices | 1010 | --- | --- | --- |
| fluid reasoning | lasa | grip | raven | 782 | .03( .07), =.66 | .32(1.66), =.85 | .01( .03), =.70 |
| fluid reasoning | ilse | grip | spatial\_ab | 225 | .01( .10), =.94 | .37( .79), =.64 | -.01( .09), =.92 |
| mental status | nuage | grip | mmms | 934 | .04( .05), =.38 | .28( .16), =.09 . | .02( .02), =.34 |
| mental status | eas | grip | mmse | 150 | .24( .18), =.17 | -.40(1.25), =.75 | -.00( .11), =.96 |
| mental status | map | grip | mmse | 1010 | --- | --- | --- |
| mental status | nuage | grip | mmse | 934 | .08( .06), =.20 | .16( .33), =.62 | -.00( .02), =.92 |
| mental status | satsa | grip | mmse | 412 | --- | --- | --- |
| mental status | hrs | grip | tics | 641 | --- | --- | --- |
| perceptual speed | lasa | grip | letter | 782 | .03( .06), =.59 | .40( .93), =.67 | .08( .03), <.01 \*\* |
| perceptual speed | map | grip | num\_comp | 1010 | --- | --- | --- |
| perceptual speed | ilse | grip | symbol | 225 | -.25( .09), =.01 \*\* | .21( .30), =.48 | -.01( .07), =.86 |
| perceptual speed | map | grip | symbol | 1010 | --- | --- | --- |
| perceptual speed | octo | grip | symbol | 271 | .18( .08), =.02 \* | .17( .31), =.58 | .12( .05), =.02 \* |
| perceptual speed | satsa | grip | symbol | 409 | .23( .10), =.02 \* | .39( .28), =.17 | .11( .04), <.01 \*\* |
| semantic memory | eas | grip | bnt | 150 | .33( .17), =.05 \* | .26(1.00), =.80 | .01( .07), =.89 |
| semantic memory | map | grip | bnt | 1010 | --- | --- | --- |
| semantic memory | map | grip | nart | 1010 | --- | --- | --- |
| semantic memory | satsa | grip | synonyms | 410 | --- | --- | --- |
| semantic memory | eas | grip | waisvocab | 150 | .15( .15), =.32 | .58(1.60), =.72 | -.08( .09), =.37 |
| semantic memory | elsa | grip | word\_de | 3511 | .13( .03), <.01 \*\*\* | -.02( .57), =.97 | .02( .02), =.30 |
| semantic memory | elsa | grip | word\_de | 3511 | .13( .03), <.01 \*\*\* | -.02( .57), =.97 | .02( .02), =.30 |
| semantic memory | hrs | grip | word\_de | 4612 | .09( .03), <.01 \*\*\* | .04( .41), =.92 | .05( .02), =.01 \* |
| semantic memory | map | grip | word\_de | 1010 | --- | --- | --- |
| short-term memory | map | grip | bstory\_im | 1010 | --- | --- | --- |
| short-term memory | eas | grip | digit\_tot | 150 | -.15( .15), =.33 | -.39( .81), =.63 | .02( .09), =.78 |
| short-term memory | map | grip | logic\_im | 1010 | --- | --- | --- |
| short-term memory | octo | grip | prose\_im | 272 | .14( .07), =.07 . | .37( .35), =.29 | .06( .07), =.38 |
| short-term memory | elsa | grip | word\_im | 3511 | .12( .04), <.01 \*\*\* | -.03( .28), =.91 | .02( .02), =.49 |
| short-term memory | hrs | grip | word\_im | 4612 | .14( .03), <.01 \*\*\* | .32( .51), =.53 | .03( .02), =.14 |
| short-term memory | lasa | grip | word\_im | 782 | .11( .07), =.10 | .23(2.09), =.91 | .12( .03), <.01 \*\*\* |
| short-term memory | map | grip | word\_im | 1010 | --- | --- | --- |
| verbal comprehension | map | grip | ideas | 1010 | --- | --- | --- |
| visual discrimination | map | grip | line | 1010 | --- | --- | --- |
| visual discrimination | ilse | grip | piccomp | 225 | .04( .12), =.76 | .26( .48), =.59 | .01( .08), =.90 |
| working memory | map | grip | digit\_b | 1010 | --- | --- | --- |
| working memory | octo | grip | digit\_b | 275 | -.00( .10), =.98 | -.44( .64), =.49 | .05( .05), =.35 |
| working memory | satsa | grip | digit\_b | 409 | .12( .13), =.35 | .34( .33), =.31 | .04( .03), =.27 |
| working memory | map | grip | digit\_o | 1010 | --- | --- | --- |
| NA | eas | grip | NA | 150 | .15( .19), =.44 | .15( .86), =.86 | .02( .09), =.81 |
| NA | eas | grip | NA | 150 | .31( .15), =.04 \* | .67(1.15), =.56 | -.11( .09), =.22 |

# Session Information

For the sake of documentation and reproducibility, the current report was rendered on a system using the following software.

Report rendered by koval\_000 at 2016-11-12, 12:39 -0500

R version 3.3.1 (2016-06-21)  
Platform: x86\_64-w64-mingw32/x64 (64-bit)  
Running under: Windows >= 8 x64 (build 9200)  
  
locale:  
[1] LC\_COLLATE=English\_United States.1252 LC\_CTYPE=English\_United States.1252 LC\_MONETARY=English\_United States.1252  
[4] LC\_NUMERIC=C LC\_TIME=English\_United States.1252   
  
attached base packages:  
[1] stats graphics grDevices utils datasets methods base   
  
other attached packages:  
[1] ggplot2\_2.1.0 magrittr\_1.5 knitr\_1.14   
  
loaded via a namespace (and not attached):  
 [1] Rcpp\_0.12.7 munsell\_0.4.3 testit\_0.5 colorspace\_1.2-7 R6\_2.2.0 highr\_0.6   
 [7] stringr\_1.1.0 plyr\_1.8.4 dplyr\_0.5.0 tools\_3.3.1 DT\_0.2 grid\_3.3.1   
[13] gtable\_0.2.0 DBI\_0.5-1 htmltools\_0.3.5 yaml\_2.1.13 lazyeval\_0.2.0 assertthat\_0.1   
[19] digest\_0.6.10 tibble\_1.2 readr\_1.0.0 formatR\_1.4 tidyr\_0.6.0 htmlwidgets\_0.7   
[25] rsconnect\_0.5 evaluate\_0.10 rmarkdown\_1.1 stringi\_1.1.2 scales\_0.4.1