OCTO : Seed Report (all)

Date: 2017-05-02

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|  |  |  |  |
| --- | --- | --- | --- |
| condition | dementia\_entry | dementia\_ever | n |
| dem\_ever\_0 | 0 | 0 | 477 |
| dem\_entry\_0 | 0 | 1 | 126 |
| all | 1 | 1 | 98 |

# Available models

Study **OCTO** have contributed the following outcome pairs to the IASLA-2015-Portland model pool: NULL

|  |  |  |
| --- | --- | --- |
| process\_a | process\_b | n\_models |
| grip | block | 8 |
| grip | clock | 8 |
| grip | digit\_b | 8 |
| grip | digit\_f | 8 |
| grip | fig\_logic | 8 |
| grip | information | 8 |
| grip | mir | 8 |
| grip | mir\_recog | 8 |
| grip | mmse | 8 |
| grip | prose\_im | 8 |
| grip | psif | 8 |
| grip | symbol | 8 |
| grip | synonyms | 8 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| study\_name | subgroup | model\_type | process\_a | process\_b | n\_models |
| octo | female | a | grip | block | 1 |
| octo | female | a | grip | clock | 1 |
| octo | female | a | grip | digit\_b | 1 |
| octo | female | a | grip | digit\_f | 1 |
| octo | female | a | grip | fig\_logic | 1 |
| octo | female | a | grip | information | 1 |
| octo | female | a | grip | mir | 1 |
| octo | female | a | grip | mir\_recog | 1 |
| octo | female | a | grip | mmse | 1 |
| octo | female | a | grip | prose\_im | 1 |
| octo | female | a | grip | psif | 1 |
| octo | female | a | grip | symbol | 1 |
| octo | female | a | grip | synonyms | 1 |
| octo | female | ae | grip | block | 1 |
| octo | female | ae | grip | clock | 1 |
| octo | female | ae | grip | digit\_b | 1 |
| octo | female | ae | grip | digit\_f | 1 |
| octo | female | ae | grip | fig\_logic | 1 |
| octo | female | ae | grip | information | 1 |
| octo | female | ae | grip | mir | 1 |
| octo | female | ae | grip | mir\_recog | 1 |
| octo | female | ae | grip | mmse | 1 |
| octo | female | ae | grip | prose\_im | 1 |
| octo | female | ae | grip | psif | 1 |
| octo | female | ae | grip | symbol | 1 |
| octo | female | ae | grip | synonyms | 1 |
| octo | female | aeh | grip | block | 1 |
| octo | female | aeh | grip | clock | 1 |
| octo | female | aeh | grip | digit\_b | 1 |
| octo | female | aeh | grip | digit\_f | 1 |
| octo | female | aeh | grip | fig\_logic | 1 |
| octo | female | aeh | grip | information | 1 |
| octo | female | aeh | grip | mir | 1 |
| octo | female | aeh | grip | mir\_recog | 1 |
| octo | female | aeh | grip | mmse | 1 |
| octo | female | aeh | grip | prose\_im | 1 |
| octo | female | aeh | grip | psif | 1 |
| octo | female | aeh | grip | symbol | 1 |
| octo | female | aeh | grip | synonyms | 1 |
| octo | female | aehplus | grip | block | 1 |
| octo | female | aehplus | grip | clock | 1 |
| octo | female | aehplus | grip | digit\_b | 1 |
| octo | female | aehplus | grip | digit\_f | 1 |
| octo | female | aehplus | grip | fig\_logic | 1 |
| octo | female | aehplus | grip | information | 1 |
| octo | female | aehplus | grip | mir | 1 |
| octo | female | aehplus | grip | mir\_recog | 1 |
| octo | female | aehplus | grip | mmse | 1 |
| octo | female | aehplus | grip | prose\_im | 1 |
| octo | female | aehplus | grip | psif | 1 |
| octo | female | aehplus | grip | symbol | 1 |
| octo | female | aehplus | grip | synonyms | 1 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| study\_name | subgroup | model\_type | process\_a | process\_b | n\_models |
| octo | male | a | grip | block | 1 |
| octo | male | a | grip | clock | 1 |
| octo | male | a | grip | digit\_b | 1 |
| octo | male | a | grip | digit\_f | 1 |
| octo | male | a | grip | fig\_logic | 1 |
| octo | male | a | grip | information | 1 |
| octo | male | a | grip | mir | 1 |
| octo | male | a | grip | mir\_recog | 1 |
| octo | male | a | grip | mmse | 1 |
| octo | male | a | grip | prose\_im | 1 |
| octo | male | a | grip | psif | 1 |
| octo | male | a | grip | symbol | 1 |
| octo | male | a | grip | synonyms | 1 |
| octo | male | ae | grip | block | 1 |
| octo | male | ae | grip | clock | 1 |
| octo | male | ae | grip | digit\_b | 1 |
| octo | male | ae | grip | digit\_f | 1 |
| octo | male | ae | grip | fig\_logic | 1 |
| octo | male | ae | grip | information | 1 |
| octo | male | ae | grip | mir | 1 |
| octo | male | ae | grip | mir\_recog | 1 |
| octo | male | ae | grip | mmse | 1 |
| octo | male | ae | grip | prose\_im | 1 |
| octo | male | ae | grip | psif | 1 |
| octo | male | ae | grip | symbol | 1 |
| octo | male | ae | grip | synonyms | 1 |
| octo | male | aeh | grip | block | 1 |
| octo | male | aeh | grip | clock | 1 |
| octo | male | aeh | grip | digit\_b | 1 |
| octo | male | aeh | grip | digit\_f | 1 |
| octo | male | aeh | grip | fig\_logic | 1 |
| octo | male | aeh | grip | information | 1 |
| octo | male | aeh | grip | mir | 1 |
| octo | male | aeh | grip | mir\_recog | 1 |
| octo | male | aeh | grip | mmse | 1 |
| octo | male | aeh | grip | prose\_im | 1 |
| octo | male | aeh | grip | psif | 1 |
| octo | male | aeh | grip | symbol | 1 |
| octo | male | aeh | grip | synonyms | 1 |
| octo | male | aehplus | grip | block | 1 |
| octo | male | aehplus | grip | clock | 1 |
| octo | male | aehplus | grip | digit\_b | 1 |
| octo | male | aehplus | grip | digit\_f | 1 |
| octo | male | aehplus | grip | fig\_logic | 1 |
| octo | male | aehplus | grip | information | 1 |
| octo | male | aehplus | grip | mir | 1 |
| octo | male | aehplus | grip | mir\_recog | 1 |
| octo | male | aehplus | grip | mmse | 1 |
| octo | male | aehplus | grip | prose\_im | 1 |
| octo | male | aehplus | grip | psif | 1 |
| octo | male | aehplus | grip | symbol | 1 |
| octo | male | aehplus | grip | synonyms | 1 |

# female

Gender = *female*; Model type: *aehplus*; Process (a) = *grip*; Process (b): *block*, *clock*, *digit\_b*, *digit\_f*, *fig\_logic*, *information*, *mir*, *mir\_recog*, *mmse*, *prose\_im*, *psif*, *symbol*, *synonyms*

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| process | label | block | clock | digit\_b | digit\_f | fig\_logic | information | mir | mir\_recog | mmse | prose\_im | psif | symbol | synonyms | mean(sd) |
| ab | Covar (Levels) | 2.75 (0.79) <.01 | 1.14 (0.49) .02 | 0.13 (0.17) .43 | 0.13 (0.15) .40 | 1.25 (0.43) <.01 | 2.91 (1.14) .01 | 0.71 (0.32) .02 | 0.34 (0.26) .20 | 0.90 (0.57) .11 | 0.97 (0.50) .05 | --- | 2.44 (1.31) .06 | 0.81 (0.65) .21 | --- |
| ab | Covar (Slopes) | 0.06 (0.02) <.01 | 0.11 (0.03) <.01 | 0.01 (0.01) .42 | 0.02 (0.01) .02 | 0.04 (0.02) .06 | 0.16 (0.06) <.01 | 0.05 (0.01) <.01 | 0.07 (0.02) <.01 | 0.29 (0.07) <.01 | 0.06 (0.02) .01 | --- | 0.06 (0.04) .10 | 0.07 (0.03) .01 | --- |
| ab | Covar (Residuals) | 0.42 (0.18) .02 | 0.55 (0.19) <.01 | 0.16 (0.07) .02 | 0.09 (0.06) .12 | 0.15 (0.19) .42 | 0.04 (0.26) .89 | 0.14 (0.08) .07 | 0.30 (0.10) <.01 | 0.86 (0.27) <.01 | 0.38 (0.18) .03 | --- | 0.99 (0.34) <.01 | -0.04 (0.19) .82 | --- |
| er | Corr (Levels) | 0.26 (0.07) <.01 | 0.26 (0.09) <.01 | 0.09 (0.11) .41 | 0.10 (0.11) .37 | 0.27 (0.09) <.01 | 0.16 (0.06) .01 | 0.17 (0.07) .02 | 0.11 (0.08) .17 | 0.17 (0.10) .07 | 0.16 (0.08) .04 | --- | 0.15 (0.08) .05 | 0.11 (0.08) .20 | --- |
| er | Corr (Slopes) | 0.63 (0.16) <.01 | 0.82 (0.10) <.01 | 0.33 (0.33) .32 | 0.63 (0.17) <.01 | 0.96 (0.43) .03 | 0.88 (0.15) <.01 | 0.62 (0.12) <.01 | 0.71 (0.11) <.01 | 0.89 (0.04) <.01 | 0.61 (0.16) <.01 | --- | 0.40 (0.21) .06 | 0.79 (0.19) <.01 | --- |
| er | Corr (Residuals) | 0.10 (0.04) .02 | 0.20 (0.06) <.01 | 0.11 (0.05) .01 | 0.08 (0.05) .11 | 0.04 (0.05) .42 | 0.01 (0.05) .89 | 0.08 (0.04) .07 | 0.21 (0.06) <.01 | 0.25 (0.06) <.01 | 0.14 (0.06) .02 | --- | 0.15 (0.05) <.01 | -0.01 (0.06) .82 | --- |
| a | Level | 9.12 (0.24) <.01 | 9.14 (0.24) <.01 | 9.13 (0.24) <.01 | 9.12 (0.24) <.01 | 9.12 (0.24) <.01 | 9.13 (0.24) <.01 | 9.14 (0.24) <.01 | 9.16 (0.24) <.01 | 9.16 (0.24) <.01 | 9.14 (0.24) <.01 | --- | 9.13 (0.24) <.01 | 9.12 (0.24) <.01 | 9.13(0.01) |
| a | Slope | 13.38 (0.76) <.01 | 14.22 (0.36) <.01 | 3.60 (0.14) <.01 | 5.52 (0.13) <.01 | 16.64 (0.43) <.01 | 27.47 (1.23) <.01 | 6.89 (0.31) <.01 | 9.36 (0.23) <.01 | 27.93 (0.42) <.01 | 10.18 (0.44) <.01 | --- | 25.97 (1.24) <.01 | 16.34 (0.68) <.01 | 14.79(8.48) |
| a | Level \* age | -0.17 (0.04) <.01 | -0.18 (0.04) <.01 | -0.17 (0.04) <.01 | -0.17 (0.04) <.01 | -0.17 (0.04) <.01 | -0.17 (0.04) <.01 | -0.17 (0.04) <.01 | -0.18 (0.04) <.01 | -0.18 (0.04) <.01 | -0.17 (0.04) <.01 | --- | -0.17 (0.04) <.01 | -0.17 (0.04) <.01 | -0.17(0.00) |
| a | Level \* education | 0.15 (0.07) .02 | 0.15 (0.07) .03 | 0.16 (0.07) .02 | 0.16 (0.07) .02 | 0.15 (0.07) .02 | 0.15 (0.07) .02 | 0.15 (0.07) .02 | 0.15 (0.07) .03 | 0.15 (0.07) .03 | 0.16 (0.07) .02 | --- | 0.16 (0.07) .02 | 0.15 (0.07) .02 | 0.15(0.00) |
| a | Level \* height | 10.11 (2.13) <.01 | 9.77 (2.12) <.01 | 9.95 (2.12) <.01 | 9.85 (2.12) <.01 | 9.96 (2.14) <.01 | 10.07 (2.13) <.01 | 9.97 (2.13) <.01 | 9.94 (2.13) <.01 | 9.87 (2.10) <.01 | 10.09 (2.14) <.01 | --- | 10.03 (2.13) <.01 | 10.00 (2.13) <.01 | 9.97(0.10) |
| a | Level \* smoking | -0.10 (0.30) .73 | -0.09 (0.30) .76 | -0.12 (0.30) .68 | -0.12 (0.30) .68 | -0.13 (0.30) .67 | -0.12 (0.30) .70 | -0.09 (0.30) .77 | -0.09 (0.30) .77 | -0.10 (0.30) .74 | -0.11 (0.30) .72 | --- | -0.11 (0.30) .72 | -0.12 (0.30) .68 | -0.11(0.01) |
| a | Level \* cardio | -0.07 (0.21) .73 | -0.08 (0.21) .69 | -0.06 (0.21) .76 | -0.08 (0.21) .71 | -0.07 (0.21) .76 | -0.06 (0.21) .77 | -0.08 (0.21) .70 | -0.09 (0.21) .67 | -0.08 (0.21) .70 | -0.08 (0.21) .71 | --- | -0.07 (0.21) .74 | -0.07 (0.21) .74 | -0.08(0.01) |
| a | Level \* diabetes | 0.14 (0.41) .73 | 0.11 (0.41) .78 | 0.12 (0.40) .78 | 0.10 (0.40) .79 | 0.12 (0.41) .76 | 0.13 (0.41) .75 | 0.12 (0.41) .76 | 0.10 (0.41) .80 | 0.10 (0.42) .81 | 0.12 (0.41) .77 | --- | 0.12 (0.41) .76 | 0.12 (0.40) .77 | 0.12(0.01) |
| a | Slope \* age | 0.00 (0.01) .95 | -0.00 (0.01) .82 | 0.00 (0.01) .86 | 0.00 (0.01) .94 | 0.00 (0.01) .96 | -0.00 (0.01) .89 | 0.00 (0.01) .85 | 0.00 (0.01) .80 | -0.00 (0.01) .60 | 0.00 (0.01) .96 | --- | 0.00 (0.01) .90 | 0.00 (0.01) .88 | 0.00(0.00) |
| a | Slope \* education | 0.00 (0.01) .95 | 0.00 (0.01) .93 | -0.00 (0.01) .89 | -0.00 (0.01) .85 | -0.00 (0.01) .88 | 0.00 (0.01) .96 | 0.00 (0.01) .91 | 0.01 (0.01) .69 | 0.00 (0.01) .86 | 0.00 (0.01) .99 | --- | -0.00 (0.01) .90 | -0.00 (0.01) .93 | 0.00(0.00) |
| a | Slope \* height | -0.32 (0.35) .36 | -0.39 (0.36) .28 | -0.29 (0.36) .42 | -0.15 (0.35) .67 | -0.32 (0.36) .36 | -0.39 (0.36) .29 | -0.25 (0.36) .49 | -0.31 (0.37) .40 | -0.37 (0.36) .30 | -0.25 (0.36) .48 | --- | -0.22 (0.35) .52 | -0.30 (0.35) .39 | -0.30(0.07) |
| a | Slope \* smoking | -0.07 (0.06) .21 | -0.07 (0.06) .26 | -0.05 (0.06) .40 | -0.05 (0.06) .38 | -0.05 (0.06) .38 | -0.05 (0.06) .35 | -0.08 (0.06) .17 | -0.06 (0.06) .28 | -0.07 (0.06) .22 | -0.07 (0.06) .23 | --- | -0.07 (0.06) .24 | -0.05 (0.06) .38 | -0.06(0.01) |
| a | Slope \* cardio | -0.03 (0.04) .47 | -0.02 (0.04) .56 | -0.03 (0.04) .41 | -0.02 (0.04) .56 | -0.03 (0.04) .42 | -0.04 (0.04) .36 | -0.02 (0.04) .68 | -0.01 (0.04) .71 | -0.02 (0.04) .62 | -0.02 (0.04) .55 | --- | -0.03 (0.04) .43 | -0.03 (0.04) .50 | -0.03(0.01) |
| a | Slope \* diabetes | -0.07 (0.09) .44 | -0.07 (0.09) .42 | -0.07 (0.09) .41 | -0.07 (0.10) .48 | -0.07 (0.09) .46 | -0.07 (0.09) .47 | -0.07 (0.09) .44 | -0.08 (0.09) .39 | -0.04 (0.09) .66 | -0.07 (0.09) .43 | --- | -0.06 (0.09) .49 | -0.07 (0.09) .45 | -0.07(0.01) |
| b | Level | -0.40 (0.04) <.01 | -0.41 (0.04) <.01 | -0.40 (0.04) <.01 | -0.39 (0.04) <.01 | -0.39 (0.04) <.01 | -0.39 (0.04) <.01 | -0.41 (0.04) <.01 | -0.42 (0.04) <.01 | -0.43 (0.04) <.01 | -0.41 (0.04) <.01 | --- | -0.40 (0.04) <.01 | -0.39 (0.04) <.01 | --- |
| b | Slope | -0.32 (0.11) <.01 | -0.38 (0.09) <.01 | -0.10 (0.03) <.01 | -0.12 (0.03) <.01 | -0.18 (0.08) .04 | -0.32 (0.15) .04 | -0.13 (0.06) .02 | -0.14 (0.06) .02 | -0.70 (0.17) <.01 | -0.14 (0.08) .08 | --- | -0.36 (0.18) .05 | -0.13 (0.10) .19 | --- |
| b | Level \* age | -0.49 (0.14) <.01 | -0.12 (0.07) .10 | -0.09 (0.03) <.01 | -0.05 (0.02) .01 | -0.20 (0.08) .02 | -0.68 (0.23) <.01 | -0.18 (0.05) <.01 | -0.05 (0.04) .26 | -0.18 (0.07) .01 | -0.25 (0.08) <.01 | --- | -0.75 (0.25) <.01 | -0.02 (0.13) .85 | --- |
| b | Level \* education | 1.10 (0.19) <.01 | 0.28 (0.07) <.01 | 0.17 (0.04) <.01 | 0.13 (0.03) <.01 | 0.38 (0.12) <.01 | 2.72 (0.27) <.01 | 0.31 (0.08) <.01 | 0.26 (0.05) <.01 | 0.60 (0.09) <.01 | 0.72 (0.10) <.01 | --- | 2.37 (0.35) <.01 | 1.35 (0.12) <.01 | --- |
| b | Level \* height | 5.16 (6.12) .40 | 0.73 (3.65) .84 | 0.21 (1.36) .88 | 0.81 (0.92) .38 | 2.44 (4.21) .56 | 8.06 (11.83) .50 | -1.24 (2.52) .62 | -2.19 (1.91) .25 | 3.66 (3.79) .34 | 0.87 (3.80) .82 | --- | 10.24 (11.15) .36 | 10.42 (5.82) .07 | --- |
| b | Level \* smoking | -1.93 (0.87) .03 | -0.44 (0.36) .22 | -0.17 (0.18) .32 | -0.04 (0.14) .79 | -1.59 (0.55) <.01 | 0.80 (1.28) .53 | -0.53 (0.37) .15 | -0.49 (0.26) .06 | -1.01 (0.50) .04 | -0.43 (0.53) .42 | --- | -1.57 (1.49) .29 | 0.56 (0.68) .41 | --- |
| b | Level \* cardio | 0.07 (0.67) .92 | 0.34 (0.30) .25 | 0.18 (0.14) .20 | 0.06 (0.12) .63 | -0.18 (0.45) .69 | 1.92 (1.11) .08 | 0.39 (0.28) .15 | 0.40 (0.21) .06 | 0.20 (0.42) .63 | 0.70 (0.40) .08 | --- | 1.81 (1.14) .11 | 0.47 (0.60) .43 | --- |
| b | Level \* diabetes | -0.57 (1.71) .74 | -0.38 (0.61) .53 | 0.04 (0.25) .88 | 0.09 (0.21) .66 | -0.17 (0.95) .85 | -2.20 (2.51) .38 | -0.36 (0.65) .58 | -0.13 (0.45) .78 | -1.28 (0.91) .16 | -1.78 (0.94) .06 | --- | -2.71 (2.55) .29 | -2.48 (1.18) .04 | --- |
| b | Slope \* age | -0.01 (0.02) .46 | -0.04 (0.02) .02 | 0.01 (0.01) .26 | 0.00 (0.00) .98 | -0.01 (0.02) .74 | -0.05 (0.03) .10 | -0.01 (0.01) .28 | -0.03 (0.01) .04 | -0.08 (0.03) .02 | -0.00 (0.02) .89 | --- | -0.04 (0.04) .34 | 0.00 (0.02) .94 | --- |
| b | Slope \* education | 0.00 (0.03) .99 | 0.07 (0.02) <.01 | 0.01 (0.01) .10 | 0.01 (0.01) .37 | -0.01 (0.03) .68 | 0.02 (0.04) .70 | 0.01 (0.02) .63 | 0.05 (0.01) <.01 | 0.12 (0.04) .01 | 0.01 (0.02) .67 | --- | 0.01 (0.06) .88 | 0.02 (0.03) .49 | --- |
| b | Slope \* height | 0.61 (0.80) .44 | -0.83 (0.84) .32 | 0.15 (0.25) .54 | 0.07 (0.26) .80 | 0.13 (0.83) .87 | 1.13 (1.56) .47 | 0.69 (0.55) .21 | 0.21 (0.54) .70 | -0.41 (1.34) .76 | 0.47 (0.95) .62 | --- | 1.02 (1.82) .57 | -0.08 (1.01) .94 | --- |
| b | Slope \* smoking | 0.01 (0.14) .95 | -0.10 (0.12) .44 | 0.01 (0.03) .75 | 0.01 (0.04) .71 | 0.17 (0.13) .19 | -0.26 (0.21) .21 | -0.07 (0.08) .36 | -0.09 (0.08) .26 | -0.34 (0.20) .09 | -0.22 (0.10) .04 | --- | -0.52 (0.24) .03 | -0.15 (0.15) .29 | --- |
| b | Slope \* cardio | -0.15 (0.11) .18 | -0.07 (0.10) .47 | -0.04 (0.03) .13 | 0.01 (0.03) .68 | 0.01 (0.10) .93 | -0.53 (0.15) <.01 | -0.10 (0.06) .10 | -0.04 (0.06) .55 | -0.07 (0.17) .69 | -0.20 (0.09) .03 | --- | -0.62 (0.19) <.01 | -0.08 (0.11) .46 | --- |
| b | Slope \* diabetes | -0.05 (0.17) .78 | -0.12 (0.18) .51 | -0.07 (0.07) .30 | -0.04 (0.05) .52 | 0.09 (0.17) .61 | -0.08 (0.40) .84 | -0.07 (0.13) .59 | -0.20 (0.14) .16 | -0.05 (0.25) .84 | 0.05 (0.16) .73 | --- | 0.26 (0.58) .66 | -0.18 (0.21) .39 | --- |
| a | Var (Level) | 3.21 (0.44) <.01 | 3.21 (0.43) <.01 | 3.18 (0.44) <.01 | 3.16 (0.43) <.01 | 3.19 (0.44) <.01 | 3.21 (0.44) <.01 | 3.20 (0.43) <.01 | 3.16 (0.43) <.01 | 3.17 (0.41) <.01 | 3.19 (0.44) <.01 | --- | 3.16 (0.44) <.01 | 3.17 (0.43) <.01 | 3.19(0.02) |
| a | Var (Slope) | 0.04 (0.02) .02 | 0.05 (0.02) .01 | 0.04 (0.02) .02 | 0.04 (0.02) .02 | 0.04 (0.02) .02 | 0.04 (0.02) .02 | 0.05 (0.02) .01 | 0.06 (0.02) .01 | 0.07 (0.02) <.01 | 0.05 (0.02) .02 | --- | 0.04 (0.02) .03 | 0.04 (0.02) .03 | 0.05(0.01) |
| a | Var (Residual) | 1.54 (0.15) <.01 | 1.52 (0.15) <.01 | 1.53 (0.15) <.01 | 1.54 (0.15) <.01 | 1.53 (0.15) <.01 | 1.53 (0.15) <.01 | 1.52 (0.14) <.01 | 1.52 (0.14) <.01 | 1.52 (0.14) <.01 | 1.53 (0.15) <.01 | --- | 1.56 (0.15) <.01 | 1.55 (0.15) <.01 | 1.53(0.01) |
| b | Var (Level) | 34.16 (3.02) <.01 | 5.97 (1.54) <.01 | 0.68 (0.16) <.01 | 0.52 (0.10) <.01 | 6.61 (1.21) <.01 | 96.73 (7.52) <.01 | 5.68 (0.58) <.01 | 2.83 (0.58) <.01 | 8.79 (1.88) <.01 | 10.75 (1.11) <.01 | --- | 78.19 (7.27) <.01 | 18.04 (2.11) <.01 | --- |
| b | Var (Slope) | 0.25 (0.07) <.01 | 0.36 (0.07) <.01 | 0.01 (0.01) .23 | 0.02 (0.01) <.01 | 0.04 (0.05) .35 | 0.71 (0.24) <.01 | 0.13 (0.02) <.01 | 0.19 (0.04) <.01 | 1.52 (0.31) <.01 | 0.20 (0.04) <.01 | --- | 0.54 (0.17) <.01 | 0.20 (0.07) <.01 | --- |
| b | Var (Residual) | 10.68 (0.74) <.01 | 4.94 (0.59) <.01 | 1.37 (0.10) <.01 | 0.78 (0.06) <.01 | 9.63 (0.65) <.01 | 17.46 (1.38) <.01 | 1.91 (0.14) <.01 | 1.38 (0.24) <.01 | 7.59 (0.91) <.01 | 4.99 (0.38) <.01 | --- | 28.59 (2.07) <.01 | 6.89 (0.53) <.01 | --- |
| a | Covar (Level, Slope) | -0.06 (0.06) .30 | -0.05 (0.06) .43 | -0.05 (0.06) .40 | -0.04 (0.06) .49 | -0.06 (0.06) .30 | -0.07 (0.06) .28 | -0.06 (0.06) .28 | -0.05 (0.06) .41 | -0.01 (0.06) .82 | -0.06 (0.06) .35 | --- | -0.05 (0.06) .36 | -0.06 (0.06) .33 | -0.05(0.01) |
| b | Covar (Level, Slope) | -0.66 (0.36) .07 | 0.87 (0.21) <.01 | 0.00 (0.02) .88 | 0.00 (0.02) .99 | -0.02 (0.18) .93 | 1.49 (0.73) .04 | 0.13 (0.07) .07 | 0.36 (0.10) <.01 | 2.83 (0.52) <.01 | -0.01 (0.15) .95 | --- | -0.02 (0.90) .99 | -0.10 (0.27) .71 | --- |
|  | Correlation of Levels | 0.26 | 0.26 | 0.089 | 0.100 | 0.272 | 0.1653 | 0.167 | 0.11 | 0.17 | 0.17 | NaN | 0.15 | 0.108 | 0.17(0.06) |
|  | Correlation of Slopes | 0.63 | 0.82 | 0.338 | 0.632 | 0.966 | 0.8796 | 0.622 | 0.72 | 0.89 | 0.61 | NaN | 0.40 | 0.796 | 0.69(0.19) |
|  | Correlation of Residuals | 0.10 | 0.20 | 0.114 | 0.081 | 0.039 | 0.0071 | 0.081 | 0.21 | 0.25 | 0.14 | NaN | 0.15 | -0.013 | 0.11(0.08) |
|  | N | 378 | 380 | 380 | 380 | 375 | 377 | 376 | 376 | 380 | 376 | NA | 374 | 373 | 377.08(2.50) |
|  | occasions | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | NA | 5 | 5 | 5.00(0.00) |
|  | parameters | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | NA | 41 | 41 | 41.00(0.00) |
|  | LL | -5,830 | -5,713 | -4,706 | -4,454 | -4,996 | -6,327 | -5,041 | -4,848 | -6,226 | -5,281 | NA | -5,762 | -4,922 | -5,342( 613) |
|  | AIC | 11,742 | 11,509 | 9,494 | 8,990 | 10,074 | 12,735 | 10,164 | 9,778 | 12,534 | 10,643 | NA | 11,605 | 9,925 | 10,766(1,226) |
|  | BIC | 11,903 | 11,670 | 9,656 | 9,151 | 10,235 | 12,897 | 10,325 | 9,939 | 12,695 | 10,805 | NA | 11,766 | 10,086 | 10,927(1,226) |

## block

Gender = *female*; Process (a) = *grip*; Process (b) = *block*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| process | label | a | ae | aeh | aehplus |
| ab | Covar (Levels) | 5.71 (1.01) <.01 | 4.01 (0.89) <.01 | 2.79 (0.81) <.01 | 2.75 (0.79) <.01 |
| ab | Covar (Slopes) | 0.07 (0.02) .01 | 0.07 (0.02) .01 | 0.07 (0.02) <.01 | 0.06 (0.02) <.01 |
| ab | Covar (Residuals) | 0.44 (0.18) .01 | 0.46 (0.18) .01 | 0.43 (0.18) .02 | 0.42 (0.18) .02 |
| er | Corr (Levels) | 0.41 (0.06) <.01 | 0.33 (0.07) <.01 | 0.26 (0.07) <.01 | 0.26 (0.07) <.01 |
| er | Corr (Slopes) | 0.59 (0.16) <.01 | 0.61 (0.15) <.01 | 0.61 (0.16) <.01 | 0.63 (0.16) <.01 |
| er | Corr (Residuals) | 0.11 (0.04) .01 | 0.11 (0.04) .01 | 0.11 (0.04) .02 | 0.10 (0.04) .02 |
| a | Level | 8.53 (0.21) <.01 | 8.62 (0.20) <.01 | 9.05 (0.20) <.01 | 9.12 (0.24) <.01 |
| a | Slope | 12.07 (0.64) <.01 | 12.22 (0.60) <.01 | 12.81 (0.64) <.01 | 13.38 (0.76) <.01 |
| a | Level \* age | -0.20 (0.04) <.01 | -0.19 (0.04) <.01 | -0.17 (0.04) <.01 | -0.17 (0.04) <.01 |
| a | Level \* education | --- | 0.18 (0.06) <.01 | 0.15 (0.06) .02 | 0.15 (0.07) .02 |
| a | Level \* height | --- | --- | 10.40 (2.09) <.01 | 10.11 (2.13) <.01 |
| a | Level \* smoking | --- | --- | --- | -0.10 (0.30) .73 |
| a | Level \* cardio | --- | --- | --- | -0.07 (0.21) .73 |
| a | Level \* diabetes | --- | --- | --- | 0.14 (0.41) .73 |
| a | Slope \* age | -0.01 (0.01) .25 | -0.01 (0.01) .34 | -0.00 (0.01) .93 | 0.00 (0.01) .95 |
| a | Slope \* education | --- | -0.01 (0.01) .67 | -0.00 (0.01) .78 | 0.00 (0.01) .95 |
| a | Slope \* height | --- | --- | -0.34 (0.36) .34 | -0.32 (0.35) .36 |
| a | Slope \* smoking | --- | --- | --- | -0.07 (0.06) .21 |
| a | Slope \* cardio | --- | --- | --- | -0.03 (0.04) .47 |
| a | Slope \* diabetes | --- | --- | --- | -0.07 (0.09) .44 |
| b | Level | -0.41 (0.04) <.01 | -0.41 (0.04) <.01 | -0.43 (0.04) <.01 | -0.40 (0.04) <.01 |
| b | Slope | -0.37 (0.08) <.01 | -0.37 (0.08) <.01 | -0.38 (0.09) <.01 | -0.32 (0.11) <.01 |
| b | Level \* age | -0.60 (0.12) <.01 | -0.51 (0.13) <.01 | -0.47 (0.14) <.01 | -0.49 (0.14) <.01 |
| b | Level \* education | --- | 0.92 (0.18) <.01 | 0.96 (0.19) <.01 | 1.10 (0.19) <.01 |
| b | Level \* height | --- | --- | 4.93 (6.31) .43 | 5.16 (6.12) .40 |
| b | Level \* smoking | --- | --- | --- | -1.93 (0.87) .03 |
| b | Level \* cardio | --- | --- | --- | 0.07 (0.67) .92 |
| b | Level \* diabetes | --- | --- | --- | -0.57 (1.71) .74 |
| b | Slope \* age | -0.03 (0.02) .17 | -0.03 (0.02) .21 | -0.02 (0.02) .44 | -0.01 (0.02) .46 |
| b | Slope \* education | --- | 0.01 (0.03) .78 | 0.00 (0.03) .92 | 0.00 (0.03) .99 |
| b | Slope \* height | --- | --- | 0.67 (0.80) .41 | 0.61 (0.80) .44 |
| b | Slope \* smoking | --- | --- | --- | 0.01 (0.14) .95 |
| b | Slope \* cardio | --- | --- | --- | -0.15 (0.11) .18 |
| b | Slope \* diabetes | --- | --- | --- | -0.05 (0.17) .78 |
| a | Var (Level) | 4.46 (0.52) <.01 | 3.90 (0.46) <.01 | 3.24 (0.44) <.01 | 3.21 (0.44) <.01 |
| a | Var (Slope) | 0.05 (0.02) .02 | 0.05 (0.02) .02 | 0.04 (0.02) .02 | 0.04 (0.02) .02 |
| a | Var (Residual) | 1.61 (0.15) <.01 | 1.59 (0.15) <.01 | 1.54 (0.15) <.01 | 1.54 (0.15) <.01 |
| b | Var (Level) | 42.39 (3.23) <.01 | 37.59 (3.09) <.01 | 35.27 (3.12) <.01 | 34.16 (3.02) <.01 |
| b | Var (Slope) | 0.26 (0.07) <.01 | 0.27 (0.07) <.01 | 0.26 (0.07) <.01 | 0.25 (0.07) <.01 |
| b | Var (Residual) | 10.29 (0.69) <.01 | 10.44 (0.71) <.01 | 10.65 (0.73) <.01 | 10.68 (0.74) <.01 |
| a | Covar (Level, Slope) | -0.05 (0.07) .52 | -0.07 (0.07) .30 | -0.06 (0.06) .29 | -0.06 (0.06) .30 |
| b | Covar (Level, Slope) | -0.68 (0.37) .07 | -0.72 (0.37) .06 | -0.69 (0.38) .06 | -0.66 (0.36) .07 |
|  | Correlation of Levels | 0.42 | 0.33 | 0.26 | 0.26 |
|  | Correlation of Slopes | 0.59 | 0.61 | 0.62 | 0.63 |
|  | Correlation of Residuals | 0.11 | 0.11 | 0.11 | 0.10 |
|  | N | 455 | 431 | 380 | 378 |
|  | occasions | 5 | 5 | 5 | 5 |
|  | parameters | 21 | 25 | 29 | 41 |
|  | LL | -6,515 | -6,306 | -5,854 | -5,830 |
|  | AIC | 13,071 | 12,662 | 11,767 | 11,742 |
|  | BIC | 13,158 | 12,764 | 11,881 | 11,903 |

## clock

Gender = *female*; Process (a) = *grip*; Process (b) = *clock*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| process | label | a | ae | aeh | aehplus |
| ab | Covar (Levels) | 5.16 (0.96) <.01 | 2.63 (0.75) <.01 | 1.28 (0.53) .02 | 1.14 (0.49) .02 |
| ab | Covar (Slopes) | 0.09 (0.03) <.01 | 0.11 (0.03) <.01 | 0.11 (0.03) <.01 | 0.11 (0.03) <.01 |
| ab | Covar (Residuals) | 0.63 (0.18) <.01 | 0.64 (0.19) <.01 | 0.56 (0.19) <.01 | 0.55 (0.19) <.01 |
| er | Corr (Levels) | 0.49 (0.07) <.01 | 0.36 (0.08) <.01 | 0.26 (0.09) <.01 | 0.26 (0.09) <.01 |
| er | Corr (Slopes) | 0.59 (0.14) <.01 | 0.75 (0.11) <.01 | 0.81 (0.10) <.01 | 0.82 (0.10) <.01 |
| er | Corr (Residuals) | 0.23 (0.06) <.01 | 0.22 (0.06) <.01 | 0.20 (0.06) <.01 | 0.20 (0.06) <.01 |
| a | Level | 8.49 (0.21) <.01 | 8.60 (0.20) <.01 | 9.04 (0.20) <.01 | 9.14 (0.24) <.01 |
| a | Slope | 13.29 (0.39) <.01 | 13.62 (0.34) <.01 | 14.07 (0.29) <.01 | 14.22 (0.36) <.01 |
| a | Level \* age | -0.23 (0.04) <.01 | -0.19 (0.04) <.01 | -0.17 (0.04) <.01 | -0.18 (0.04) <.01 |
| a | Level \* education | --- | 0.19 (0.06) <.01 | 0.15 (0.06) .02 | 0.15 (0.07) .03 |
| a | Level \* height | --- | --- | 9.75 (2.07) <.01 | 9.77 (2.12) <.01 |
| a | Level \* smoking | --- | --- | --- | -0.09 (0.30) .76 |
| a | Level \* cardio | --- | --- | --- | -0.08 (0.21) .69 |
| a | Level \* diabetes | --- | --- | --- | 0.11 (0.41) .78 |
| a | Slope \* age | -0.01 (0.01) .15 | -0.01 (0.01) .30 | -0.00 (0.01) .79 | -0.00 (0.01) .82 |
| a | Slope \* education | --- | -0.01 (0.01) .67 | -0.00 (0.01) .80 | 0.00 (0.01) .93 |
| a | Slope \* height | --- | --- | -0.42 (0.38) .27 | -0.39 (0.36) .28 |
| a | Slope \* smoking | --- | --- | --- | -0.07 (0.06) .26 |
| a | Slope \* cardio | --- | --- | --- | -0.02 (0.04) .56 |
| a | Slope \* diabetes | --- | --- | --- | -0.07 (0.09) .42 |
| b | Level | -0.43 (0.04) <.01 | -0.42 (0.04) <.01 | -0.44 (0.04) <.01 | -0.41 (0.04) <.01 |
| b | Slope | -0.35 (0.07) <.01 | -0.38 (0.08) <.01 | -0.43 (0.08) <.01 | -0.38 (0.09) <.01 |
| b | Level \* age | -0.38 (0.09) <.01 | -0.20 (0.09) .02 | -0.12 (0.07) .10 | -0.12 (0.07) .10 |
| b | Level \* education | --- | 0.23 (0.08) .01 | 0.20 (0.07) .01 | 0.28 (0.07) <.01 |
| b | Level \* height | --- | --- | -0.48 (4.05) .90 | 0.73 (3.65) .84 |
| b | Level \* smoking | --- | --- | --- | -0.44 (0.36) .22 |
| b | Level \* cardio | --- | --- | --- | 0.34 (0.30) .25 |
| b | Level \* diabetes | --- | --- | --- | -0.38 (0.61) .53 |
| b | Slope \* age | -0.04 (0.02) .02 | -0.05 (0.02) .01 | -0.04 (0.02) .01 | -0.04 (0.02) .02 |
| b | Slope \* education | --- | 0.05 (0.02) .01 | 0.06 (0.02) <.01 | 0.07 (0.02) <.01 |
| b | Slope \* height | --- | --- | -0.82 (0.85) .34 | -0.83 (0.84) .32 |
| b | Slope \* smoking | --- | --- | --- | -0.10 (0.12) .44 |
| b | Slope \* cardio | --- | --- | --- | -0.07 (0.10) .47 |
| b | Slope \* diabetes | --- | --- | --- | -0.12 (0.18) .51 |
| a | Var (Level) | 4.72 (0.55) <.01 | 3.97 (0.47) <.01 | 3.25 (0.43) <.01 | 3.21 (0.43) <.01 |
| a | Var (Slope) | 0.07 (0.02) <.01 | 0.06 (0.02) .01 | 0.05 (0.02) .01 | 0.05 (0.02) .01 |
| a | Var (Residual) | 1.58 (0.15) <.01 | 1.56 (0.15) <.01 | 1.52 (0.15) <.01 | 1.52 (0.15) <.01 |
| b | Var (Level) | 23.06 (2.17) <.01 | 13.53 (1.93) <.01 | 7.28 (1.66) <.01 | 5.97 (1.54) <.01 |
| b | Var (Slope) | 0.35 (0.08) <.01 | 0.35 (0.08) <.01 | 0.36 (0.07) <.01 | 0.36 (0.07) <.01 |
| b | Var (Residual) | 4.88 (0.57) <.01 | 5.11 (0.60) <.01 | 4.94 (0.59) <.01 | 4.94 (0.59) <.01 |
| a | Covar (Level, Slope) | 0.00 (0.07) .98 | -0.04 (0.07) .54 | -0.05 (0.06) .42 | -0.05 (0.06) .43 |
| b | Covar (Level, Slope) | 0.13 (0.25) .61 | 0.65 (0.25) .01 | 0.88 (0.22) <.01 | 0.87 (0.21) <.01 |
|  | Correlation of Levels | 0.49 | 0.36 | 0.26 | 0.26 |
|  | Correlation of Slopes | 0.59 | 0.74 | 0.81 | 0.82 |
|  | Correlation of Residuals | 0.23 | 0.22 | 0.20 | 0.20 |
|  | N | 482 | 441 | 384 | 380 |
|  | occasions | 5 | 5 | 5 | 5 |
|  | parameters | 21 | 25 | 29 | 41 |
|  | LL | -6,786 | -6,382 | -5,765 | -5,713 |
|  | AIC | 13,614 | 12,814 | 11,588 | 11,509 |
|  | BIC | 13,702 | 12,916 | 11,702 | 11,670 |

## digit\_b

Gender = *female*; Process (a) = *grip*; Process (b) = *digit\_b*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| process | label | a | ae | aeh | aehplus |
| ab | Covar (Levels) | 0.72 (0.23) <.01 | 0.31 (0.19) .10 | 0.12 (0.17) .47 | 0.13 (0.17) .43 |
| ab | Covar (Slopes) | 0.01 (0.01) .24 | 0.01 (0.01) .25 | 0.01 (0.01) .38 | 0.01 (0.01) .42 |
| ab | Covar (Residuals) | 0.20 (0.07) <.01 | 0.20 (0.07) <.01 | 0.17 (0.07) .02 | 0.16 (0.07) .02 |
| er | Corr (Levels) | 0.31 (0.08) <.01 | 0.17 (0.10) .08 | 0.08 (0.11) .45 | 0.09 (0.11) .41 |
| er | Corr (Slopes) | 0.40 (0.25) .11 | 0.44 (0.27) .10 | 0.35 (0.32) .27 | 0.33 (0.33) .32 |
| er | Corr (Residuals) | 0.14 (0.05) <.01 | 0.14 (0.05) <.01 | 0.12 (0.05) .01 | 0.11 (0.05) .01 |
| a | Level | 8.53 (0.21) <.01 | 8.63 (0.20) <.01 | 9.05 (0.20) <.01 | 9.13 (0.24) <.01 |
| a | Slope | 3.37 (0.12) <.01 | 3.46 (0.12) <.01 | 3.63 (0.12) <.01 | 3.60 (0.14) <.01 |
| a | Level \* age | -0.21 (0.04) <.01 | -0.19 (0.04) <.01 | -0.17 (0.04) <.01 | -0.17 (0.04) <.01 |
| a | Level \* education | --- | 0.19 (0.06) <.01 | 0.15 (0.06) .02 | 0.16 (0.07) .02 |
| a | Level \* height | --- | --- | 10.26 (2.09) <.01 | 9.95 (2.12) <.01 |
| a | Level \* smoking | --- | --- | --- | -0.12 (0.30) .68 |
| a | Level \* cardio | --- | --- | --- | -0.06 (0.21) .76 |
| a | Level \* diabetes | --- | --- | --- | 0.12 (0.40) .78 |
| a | Slope \* age | -0.01 (0.01) .43 | -0.01 (0.01) .51 | 0.00 (0.01) .94 | 0.00 (0.01) .86 |
| a | Slope \* education | --- | -0.01 (0.01) .58 | -0.01 (0.01) .70 | -0.00 (0.01) .89 |
| a | Slope \* height | --- | --- | -0.30 (0.37) .42 | -0.29 (0.36) .42 |
| a | Slope \* smoking | --- | --- | --- | -0.05 (0.06) .40 |
| a | Slope \* cardio | --- | --- | --- | -0.03 (0.04) .41 |
| a | Slope \* diabetes | --- | --- | --- | -0.07 (0.09) .41 |
| b | Level | -0.42 (0.04) <.01 | -0.41 (0.04) <.01 | -0.42 (0.04) <.01 | -0.40 (0.04) <.01 |
| b | Slope | -0.11 (0.03) <.01 | -0.11 (0.03) <.01 | -0.12 (0.03) <.01 | -0.10 (0.03) <.01 |
| b | Level \* age | -0.08 (0.03) <.01 | -0.07 (0.02) .01 | -0.09 (0.03) <.01 | -0.09 (0.03) <.01 |
| b | Level \* education | --- | 0.15 (0.03) <.01 | 0.15 (0.03) <.01 | 0.17 (0.04) <.01 |
| b | Level \* height | --- | --- | 0.16 (1.35) .90 | 0.21 (1.36) .88 |
| b | Level \* smoking | --- | --- | --- | -0.17 (0.18) .32 |
| b | Level \* cardio | --- | --- | --- | 0.18 (0.14) .20 |
| b | Level \* diabetes | --- | --- | --- | 0.04 (0.25) .88 |
| b | Slope \* age | -0.00 (0.01) .66 | -0.00 (0.01) .78 | 0.00 (0.01) .36 | 0.01 (0.01) .26 |
| b | Slope \* education | --- | 0.01 (0.01) .10 | 0.01 (0.01) .06 | 0.01 (0.01) .10 |
| b | Slope \* height | --- | --- | 0.19 (0.25) .45 | 0.15 (0.25) .54 |
| b | Slope \* smoking | --- | --- | --- | 0.01 (0.03) .75 |
| b | Slope \* cardio | --- | --- | --- | -0.04 (0.03) .13 |
| b | Slope \* diabetes | --- | --- | --- | -0.07 (0.07) .30 |
| a | Var (Level) | 4.46 (0.52) <.01 | 3.89 (0.46) <.01 | 3.21 (0.43) <.01 | 3.18 (0.44) <.01 |
| a | Var (Slope) | 0.06 (0.02) .02 | 0.05 (0.02) .02 | 0.05 (0.02) .02 | 0.04 (0.02) .02 |
| a | Var (Residual) | 1.58 (0.15) <.01 | 1.56 (0.15) <.01 | 1.52 (0.15) <.01 | 1.53 (0.15) <.01 |
| b | Var (Level) | 1.21 (0.17) <.01 | 0.88 (0.16) <.01 | 0.68 (0.16) <.01 | 0.68 (0.16) <.01 |
| b | Var (Slope) | 0.01 (0.01) .05 | 0.01 (0.01) .13 | 0.01 (0.01) .19 | 0.01 (0.01) .23 |
| b | Var (Residual) | 1.34 (0.10) <.01 | 1.36 (0.10) <.01 | 1.38 (0.10) <.01 | 1.37 (0.10) <.01 |
| a | Covar (Level, Slope) | -0.03 (0.08) .69 | -0.06 (0.07) .39 | -0.06 (0.06) .37 | -0.05 (0.06) .40 |
| b | Covar (Level, Slope) | -0.00 (0.03) .94 | -0.00 (0.02) .82 | 0.00 (0.02) .95 | 0.00 (0.02) .88 |
|  | Correlation of Levels | 0.31 | 0.17 | 0.083 | 0.089 |
|  | Correlation of Slopes | 0.40 | 0.43 | 0.361 | 0.338 |
|  | Correlation of Residuals | 0.14 | 0.14 | 0.118 | 0.114 |
|  | N | 462 | 437 | 382 | 380 |
|  | occasions | 5 | 5 | 5 | 5 |
|  | parameters | 21 | 25 | 29 | 41 |
|  | LL | -5,354 | -5,149 | -4,727 | -4,706 |
|  | AIC | 10,749 | 10,348 | 9,511 | 9,494 |
|  | BIC | 10,836 | 10,450 | 9,626 | 9,656 |

## digit\_f

Gender = *female*; Process (a) = *grip*; Process (b) = *digit\_f*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| process | label | a | ae | aeh | aehplus |
| ab | Covar (Levels) | 0.52 (0.19) <.01 | 0.17 (0.15) .26 | 0.13 (0.15) .40 | 0.13 (0.15) .40 |
| ab | Covar (Slopes) | 0.04 (0.01) <.01 | 0.03 (0.01) .01 | 0.02 (0.01) .02 | 0.02 (0.01) .02 |
| ab | Covar (Residuals) | 0.15 (0.07) .02 | 0.13 (0.06) .03 | 0.09 (0.06) .11 | 0.09 (0.06) .12 |
| er | Corr (Levels) | 0.29 (0.09) <.01 | 0.12 (0.10) .23 | 0.10 (0.11) .38 | 0.10 (0.11) .37 |
| er | Corr (Slopes) | 0.78 (0.12) <.01 | 0.72 (0.13) <.01 | 0.64 (0.17) <.01 | 0.63 (0.17) <.01 |
| er | Corr (Residuals) | 0.13 (0.05) .02 | 0.12 (0.05) .02 | 0.08 (0.05) .11 | 0.08 (0.05) .11 |
| a | Level | 8.51 (0.21) <.01 | 8.62 (0.20) <.01 | 9.04 (0.20) <.01 | 9.12 (0.24) <.01 |
| a | Slope | 5.40 (0.10) <.01 | 5.46 (0.10) <.01 | 5.54 (0.10) <.01 | 5.52 (0.13) <.01 |
| a | Level \* age | -0.20 (0.04) <.01 | -0.18 (0.04) <.01 | -0.17 (0.04) <.01 | -0.17 (0.04) <.01 |
| a | Level \* education | --- | 0.19 (0.06) <.01 | 0.16 (0.06) .02 | 0.16 (0.07) .02 |
| a | Level \* height | --- | --- | 10.17 (2.08) <.01 | 9.85 (2.12) <.01 |
| a | Level \* smoking | --- | --- | --- | -0.12 (0.30) .68 |
| a | Level \* cardio | --- | --- | --- | -0.08 (0.21) .71 |
| a | Level \* diabetes | --- | --- | --- | 0.10 (0.40) .79 |
| a | Slope \* age | -0.01 (0.01) .24 | -0.01 (0.01) .39 | 0.00 (0.01) .99 | 0.00 (0.01) .94 |
| a | Slope \* education | --- | -0.01 (0.01) .55 | -0.01 (0.01) .65 | -0.00 (0.01) .85 |
| a | Slope \* height | --- | --- | -0.16 (0.37) .65 | -0.15 (0.35) .67 |
| a | Slope \* smoking | --- | --- | --- | -0.05 (0.06) .38 |
| a | Slope \* cardio | --- | --- | --- | -0.02 (0.04) .56 |
| a | Slope \* diabetes | --- | --- | --- | -0.07 (0.10) .48 |
| b | Level | -0.42 (0.04) <.01 | -0.41 (0.04) <.01 | -0.42 (0.04) <.01 | -0.39 (0.04) <.01 |
| b | Slope | -0.12 (0.03) <.01 | -0.12 (0.02) <.01 | -0.11 (0.02) <.01 | -0.12 (0.03) <.01 |
| b | Level \* age | -0.05 (0.02) <.01 | -0.05 (0.02) .01 | -0.05 (0.02) .01 | -0.05 (0.02) .01 |
| b | Level \* education | --- | 0.13 (0.02) <.01 | 0.13 (0.02) <.01 | 0.13 (0.03) <.01 |
| b | Level \* height | --- | --- | 0.75 (0.91) .41 | 0.81 (0.92) .38 |
| b | Level \* smoking | --- | --- | --- | -0.04 (0.14) .79 |
| b | Level \* cardio | --- | --- | --- | 0.06 (0.12) .63 |
| b | Level \* diabetes | --- | --- | --- | 0.09 (0.21) .66 |
| b | Slope \* age | -0.01 (0.01) .18 | -0.00 (0.01) .38 | -0.00 (0.00) .86 | 0.00 (0.00) .98 |
| b | Slope \* education | --- | 0.00 (0.01) .56 | 0.01 (0.01) .35 | 0.01 (0.01) .37 |
| b | Slope \* height | --- | --- | 0.09 (0.27) .73 | 0.07 (0.26) .80 |
| b | Slope \* smoking | --- | --- | --- | 0.01 (0.04) .71 |
| b | Slope \* cardio | --- | --- | --- | 0.01 (0.03) .68 |
| b | Slope \* diabetes | --- | --- | --- | -0.04 (0.05) .52 |
| a | Var (Level) | 4.39 (0.50) <.01 | 3.82 (0.44) <.01 | 3.19 (0.42) <.01 | 3.16 (0.43) <.01 |
| a | Var (Slope) | 0.07 (0.03) .01 | 0.06 (0.02) .01 | 0.05 (0.02) .02 | 0.04 (0.02) .02 |
| a | Var (Residual) | 1.57 (0.15) <.01 | 1.56 (0.15) <.01 | 1.54 (0.15) <.01 | 1.54 (0.15) <.01 |
| b | Var (Level) | 0.74 (0.13) <.01 | 0.55 (0.10) <.01 | 0.52 (0.10) <.01 | 0.52 (0.10) <.01 |
| b | Var (Slope) | 0.03 (0.01) <.01 | 0.03 (0.01) <.01 | 0.02 (0.01) <.01 | 0.02 (0.01) <.01 |
| b | Var (Residual) | 0.93 (0.09) <.01 | 0.81 (0.06) <.01 | 0.78 (0.06) <.01 | 0.78 (0.06) <.01 |
| a | Covar (Level, Slope) | 0.01 (0.07) .90 | -0.04 (0.07) .60 | -0.04 (0.06) .46 | -0.04 (0.06) .49 |
| b | Covar (Level, Slope) | 0.04 (0.02) .10 | 0.01 (0.02) .69 | 0.00 (0.02) .94 | 0.00 (0.02) .99 |
|  | Correlation of Levels | 0.29 | 0.12 | 0.099 | 0.100 |
|  | Correlation of Slopes | 0.79 | 0.72 | 0.660 | 0.632 |
|  | Correlation of Residuals | 0.13 | 0.12 | 0.084 | 0.081 |
|  | N | 465 | 438 | 382 | 380 |
|  | occasions | 5 | 5 | 5 | 5 |
|  | parameters | 21 | 25 | 29 | 41 |
|  | LL | -5,190 | -4,901 | -4,472 | -4,454 |
|  | AIC | 10,421 | 9,852 | 9,001 | 8,990 |
|  | BIC | 10,508 | 9,954 | 9,116 | 9,151 |

## fig\_logic

Gender = *female*; Process (a) = *grip*; Process (b) = *fig\_logic*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| process | label | a | ae | aeh | aehplus |
| ab | Covar (Levels) | 2.48 (0.57) <.01 | 1.91 (0.50) <.01 | 1.28 (0.46) <.01 | 1.25 (0.43) <.01 |
| ab | Covar (Slopes) | 0.04 (0.02) .09 | 0.04 (0.02) .07 | 0.04 (0.02) .07 | 0.04 (0.02) .06 |
| ab | Covar (Residuals) | 0.21 (0.19) .27 | 0.20 (0.19) .28 | 0.14 (0.19) .45 | 0.15 (0.19) .42 |
| er | Corr (Levels) | 0.41 (0.08) <.01 | 0.35 (0.08) <.01 | 0.27 (0.09) <.01 | 0.27 (0.09) <.01 |
| er | Corr (Slopes) | 0.89 (0.43) .04 | 0.86 (0.37) .02 | 0.90 (0.40) .02 | 0.96 (0.43) .03 |
| er | Corr (Residuals) | 0.05 (0.05) .27 | 0.05 (0.05) .28 | 0.04 (0.05) .45 | 0.04 (0.05) .42 |
| a | Level | 8.53 (0.21) <.01 | 8.63 (0.20) <.01 | 9.05 (0.20) <.01 | 9.12 (0.24) <.01 |
| a | Slope | 15.76 (0.38) <.01 | 15.78 (0.37) <.01 | 16.15 (0.37) <.01 | 16.64 (0.43) <.01 |
| a | Level \* age | -0.20 (0.04) <.01 | -0.18 (0.04) <.01 | -0.17 (0.04) <.01 | -0.17 (0.04) <.01 |
| a | Level \* education | --- | 0.19 (0.06) <.01 | 0.15 (0.06) .02 | 0.15 (0.07) .02 |
| a | Level \* height | --- | --- | 10.27 (2.10) <.01 | 9.96 (2.14) <.01 |
| a | Level \* smoking | --- | --- | --- | -0.13 (0.30) .67 |
| a | Level \* cardio | --- | --- | --- | -0.07 (0.21) .76 |
| a | Level \* diabetes | --- | --- | --- | 0.12 (0.41) .76 |
| a | Slope \* age | -0.01 (0.01) .30 | -0.01 (0.01) .39 | 0.00 (0.01) .99 | 0.00 (0.01) .96 |
| a | Slope \* education | --- | -0.01 (0.01) .58 | -0.01 (0.01) .70 | -0.00 (0.01) .88 |
| a | Slope \* height | --- | --- | -0.34 (0.37) .36 | -0.32 (0.36) .36 |
| a | Slope \* smoking | --- | --- | --- | -0.05 (0.06) .38 |
| a | Slope \* cardio | --- | --- | --- | -0.03 (0.04) .42 |
| a | Slope \* diabetes | --- | --- | --- | -0.07 (0.09) .46 |
| b | Level | -0.40 (0.04) <.01 | -0.40 (0.04) <.01 | -0.42 (0.04) <.01 | -0.39 (0.04) <.01 |
| b | Slope | -0.12 (0.08) .11 | -0.12 (0.08) .11 | -0.14 (0.08) .08 | -0.18 (0.08) .04 |
| b | Level \* age | -0.19 (0.08) .02 | -0.15 (0.08) .06 | -0.18 (0.09) .03 | -0.20 (0.08) .02 |
| b | Level \* education | --- | 0.31 (0.11) .01 | 0.29 (0.11) .01 | 0.38 (0.12) <.01 |
| b | Level \* height | --- | --- | 2.26 (4.30) .60 | 2.44 (4.21) .56 |
| b | Level \* smoking | --- | --- | --- | -1.59 (0.55) <.01 |
| b | Level \* cardio | --- | --- | --- | -0.18 (0.45) .69 |
| b | Level \* diabetes | --- | --- | --- | -0.17 (0.95) .85 |
| b | Slope \* age | -0.01 (0.02) .50 | -0.01 (0.02) .54 | -0.01 (0.02) .73 | -0.01 (0.02) .74 |
| b | Slope \* education | --- | -0.00 (0.03) .94 | -0.00 (0.03) .97 | -0.01 (0.03) .68 |
| b | Slope \* height | --- | --- | 0.10 (0.81) .91 | 0.13 (0.83) .87 |
| b | Slope \* smoking | --- | --- | --- | 0.17 (0.13) .19 |
| b | Slope \* cardio | --- | --- | --- | 0.01 (0.10) .93 |
| b | Slope \* diabetes | --- | --- | --- | 0.09 (0.17) .61 |
| a | Var (Level) | 4.44 (0.52) <.01 | 3.88 (0.46) <.01 | 3.22 (0.43) <.01 | 3.19 (0.44) <.01 |
| a | Var (Slope) | 0.05 (0.02) .02 | 0.05 (0.02) .02 | 0.05 (0.02) .02 | 0.04 (0.02) .02 |
| a | Var (Residual) | 1.61 (0.15) <.01 | 1.58 (0.15) <.01 | 1.53 (0.15) <.01 | 1.53 (0.15) <.01 |
| b | Var (Level) | 8.32 (1.34) <.01 | 7.67 (1.25) <.01 | 6.98 (1.18) <.01 | 6.61 (1.21) <.01 |
| b | Var (Slope) | 0.04 (0.04) .36 | 0.05 (0.05) .30 | 0.05 (0.05) .31 | 0.04 (0.05) .35 |
| b | Var (Residual) | 9.56 (0.65) <.01 | 9.49 (0.65) <.01 | 9.63 (0.65) <.01 | 9.63 (0.65) <.01 |
| a | Covar (Level, Slope) | -0.05 (0.07) .49 | -0.07 (0.07) .28 | -0.06 (0.06) .28 | -0.06 (0.06) .30 |
| b | Covar (Level, Slope) | -0.05 (0.18) .78 | -0.07 (0.18) .70 | -0.04 (0.18) .80 | -0.02 (0.18) .93 |
|  | Correlation of Levels | 0.408 | 0.349 | 0.271 | 0.272 |
|  | Correlation of Slopes | 0.888 | 0.869 | 0.903 | 0.966 |
|  | Correlation of Residuals | 0.054 | 0.052 | 0.037 | 0.039 |
|  | N | 445 | 424 | 377 | 375 |
|  | occasions | 5 | 5 | 5 | 5 |
|  | parameters | 21 | 25 | 29 | 41 |
|  | LL | -5,470 | -5,348 | -5,011 | -4,996 |
|  | AIC | 10,982 | 10,747 | 10,080 | 10,074 |
|  | BIC | 11,068 | 10,848 | 10,194 | 10,235 |

## information

Gender = *female*; Process (a) = *grip*; Process (b) = *information*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| process | label | a | ae | aeh | aehplus |
| ab | Covar (Levels) | 7.59 (1.59) <.01 | 4.40 (1.19) <.01 | 2.79 (1.14) .01 | 2.91 (1.14) .01 |
| ab | Covar (Slopes) | 0.18 (0.06) <.01 | 0.17 (0.06) <.01 | 0.16 (0.06) <.01 | 0.16 (0.06) <.01 |
| ab | Covar (Residuals) | 0.06 (0.27) .82 | 0.08 (0.26) .77 | 0.06 (0.26) .83 | 0.04 (0.26) .89 |
| er | Corr (Levels) | 0.30 (0.06) <.01 | 0.22 (0.06) <.01 | 0.16 (0.06) .01 | 0.16 (0.06) .01 |
| er | Corr (Slopes) | 0.86 (0.12) <.01 | 0.85 (0.13) <.01 | 0.85 (0.13) <.01 | 0.88 (0.15) <.01 |
| er | Corr (Residuals) | 0.01 (0.05) .82 | 0.01 (0.05) .77 | 0.01 (0.05) .83 | 0.01 (0.05) .89 |
| a | Level | 8.54 (0.21) <.01 | 8.64 (0.20) <.01 | 9.06 (0.20) <.01 | 9.13 (0.24) <.01 |
| a | Slope | 27.57 (1.12) <.01 | 27.63 (0.95) <.01 | 28.41 (1.03) <.01 | 27.47 (1.23) <.01 |
| a | Level \* age | -0.20 (0.04) <.01 | -0.19 (0.04) <.01 | -0.17 (0.04) <.01 | -0.17 (0.04) <.01 |
| a | Level \* education | --- | 0.18 (0.06) <.01 | 0.15 (0.06) .02 | 0.15 (0.07) .02 |
| a | Level \* height | --- | --- | 10.31 (2.10) <.01 | 10.07 (2.13) <.01 |
| a | Level \* smoking | --- | --- | --- | -0.12 (0.30) .70 |
| a | Level \* cardio | --- | --- | --- | -0.06 (0.21) .77 |
| a | Level \* diabetes | --- | --- | --- | 0.13 (0.41) .75 |
| a | Slope \* age | -0.01 (0.01) .27 | -0.01 (0.01) .35 | -0.00 (0.01) .86 | -0.00 (0.01) .89 |
| a | Slope \* education | --- | -0.00 (0.01) .69 | -0.00 (0.01) .84 | 0.00 (0.01) .96 |
| a | Slope \* height | --- | --- | -0.42 (0.38) .27 | -0.39 (0.36) .29 |
| a | Slope \* smoking | --- | --- | --- | -0.05 (0.06) .35 |
| a | Slope \* cardio | --- | --- | --- | -0.04 (0.04) .36 |
| a | Slope \* diabetes | --- | --- | --- | -0.07 (0.09) .47 |
| b | Level | -0.41 (0.03) <.01 | -0.40 (0.03) <.01 | -0.42 (0.04) <.01 | -0.39 (0.04) <.01 |
| b | Slope | -0.64 (0.12) <.01 | -0.62 (0.12) <.01 | -0.62 (0.14) <.01 | -0.32 (0.15) .04 |
| b | Level \* age | -0.95 (0.22) <.01 | -0.77 (0.19) <.01 | -0.73 (0.22) <.01 | -0.68 (0.23) <.01 |
| b | Level \* education | --- | 2.66 (0.25) <.01 | 2.63 (0.26) <.01 | 2.72 (0.27) <.01 |
| b | Level \* height | --- | --- | 7.02 (11.77) .55 | 8.06 (11.83) .50 |
| b | Level \* smoking | --- | --- | --- | 0.80 (1.28) .53 |
| b | Level \* cardio | --- | --- | --- | 1.92 (1.11) .08 |
| b | Level \* diabetes | --- | --- | --- | -2.20 (2.51) .38 |
| b | Slope \* age | -0.07 (0.03) .02 | -0.06 (0.03) .04 | -0.05 (0.03) .10 | -0.05 (0.03) .10 |
| b | Slope \* education | --- | 0.02 (0.04) .67 | 0.02 (0.04) .72 | 0.02 (0.04) .70 |
| b | Slope \* height | --- | --- | 1.04 (1.62) .52 | 1.13 (1.56) .47 |
| b | Slope \* smoking | --- | --- | --- | -0.26 (0.21) .21 |
| b | Slope \* cardio | --- | --- | --- | -0.53 (0.15) <.01 |
| b | Slope \* diabetes | --- | --- | --- | -0.08 (0.40) .84 |
| a | Var (Level) | 4.46 (0.53) <.01 | 3.90 (0.47) <.01 | 3.24 (0.44) <.01 | 3.21 (0.44) <.01 |
| a | Var (Slope) | 0.05 (0.02) .02 | 0.05 (0.02) .02 | 0.05 (0.02) .02 | 0.04 (0.02) .02 |
| a | Var (Residual) | 1.61 (0.15) <.01 | 1.59 (0.15) <.01 | 1.53 (0.15) <.01 | 1.53 (0.15) <.01 |
| b | Var (Level) | 138.76 (8.30) <.01 | 106.22 (7.19) <.01 | 99.00 (7.50) <.01 | 96.73 (7.52) <.01 |
| b | Var (Slope) | 0.80 (0.25) <.01 | 0.78 (0.24) <.01 | 0.79 (0.25) <.01 | 0.71 (0.24) <.01 |
| b | Var (Residual) | 17.29 (1.35) <.01 | 17.36 (1.36) <.01 | 17.44 (1.37) <.01 | 17.46 (1.38) <.01 |
| a | Covar (Level, Slope) | -0.06 (0.08) .44 | -0.08 (0.07) .25 | -0.07 (0.06) .25 | -0.07 (0.06) .28 |
| b | Covar (Level, Slope) | 2.03 (0.92) .03 | 1.46 (0.75) .05 | 1.24 (0.75) .10 | 1.49 (0.73) .04 |
|  | Correlation of Levels | 0.305 | 0.216 | 0.156 | 0.1653 |
|  | Correlation of Slopes | 0.856 | 0.848 | 0.849 | 0.8796 |
|  | Correlation of Residuals | 0.012 | 0.015 | 0.011 | 0.0071 |
|  | N | 453 | 431 | 380 | 377 |
|  | occasions | 5 | 5 | 5 | 5 |
|  | parameters | 21 | 25 | 29 | 41 |
|  | LL | -7,041 | -6,854 | -6,354 | -6,327 |
|  | AIC | 14,125 | 13,757 | 12,766 | 12,735 |
|  | BIC | 14,211 | 13,859 | 12,881 | 12,897 |

## mir

Gender = *female*; Process (a) = *grip*; Process (b) = *mir*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| process | label | a | ae | aeh | aehplus |
| ab | Covar (Levels) | 1.93 (0.44) <.01 | 1.11 (0.37) <.01 | 0.73 (0.32) .02 | 0.71 (0.32) .02 |
| ab | Covar (Slopes) | 0.05 (0.01) <.01 | 0.05 (0.01) <.01 | 0.05 (0.01) <.01 | 0.05 (0.01) <.01 |
| ab | Covar (Residuals) | 0.13 (0.08) .09 | 0.15 (0.08) .06 | 0.14 (0.08) .07 | 0.14 (0.08) .07 |
| er | Corr (Levels) | 0.33 (0.07) <.01 | 0.22 (0.07) <.01 | 0.17 (0.07) .02 | 0.17 (0.07) .02 |
| er | Corr (Slopes) | 0.57 (0.12) <.01 | 0.60 (0.12) <.01 | 0.63 (0.12) <.01 | 0.62 (0.12) <.01 |
| er | Corr (Residuals) | 0.07 (0.04) .08 | 0.08 (0.04) .05 | 0.08 (0.04) .06 | 0.08 (0.04) .07 |
| a | Level | 8.56 (0.21) <.01 | 8.65 (0.20) <.01 | 9.07 (0.20) <.01 | 9.14 (0.24) <.01 |
| a | Slope | 6.58 (0.26) <.01 | 6.64 (0.25) <.01 | 6.90 (0.25) <.01 | 6.89 (0.31) <.01 |
| a | Level \* age | -0.21 (0.04) <.01 | -0.19 (0.04) <.01 | -0.17 (0.04) <.01 | -0.17 (0.04) <.01 |
| a | Level \* education | --- | 0.19 (0.06) <.01 | 0.15 (0.06) .02 | 0.15 (0.07) .02 |
| a | Level \* height | --- | --- | 10.27 (2.09) <.01 | 9.97 (2.13) <.01 |
| a | Level \* smoking | --- | --- | --- | -0.09 (0.30) .77 |
| a | Level \* cardio | --- | --- | --- | -0.08 (0.21) .70 |
| a | Level \* diabetes | --- | --- | --- | 0.12 (0.41) .76 |
| a | Slope \* age | -0.01 (0.01) .34 | -0.00 (0.01) .57 | 0.00 (0.01) .87 | 0.00 (0.01) .85 |
| a | Slope \* education | --- | -0.00 (0.01) .69 | -0.00 (0.01) .78 | 0.00 (0.01) .91 |
| a | Slope \* height | --- | --- | -0.26 (0.37) .48 | -0.25 (0.36) .49 |
| a | Slope \* smoking | --- | --- | --- | -0.08 (0.06) .17 |
| a | Slope \* cardio | --- | --- | --- | -0.02 (0.04) .68 |
| a | Slope \* diabetes | --- | --- | --- | -0.07 (0.09) .44 |
| b | Level | -0.44 (0.04) <.01 | -0.43 (0.04) <.01 | -0.44 (0.04) <.01 | -0.41 (0.04) <.01 |
| b | Slope | -0.22 (0.05) <.01 | -0.22 (0.05) <.01 | -0.20 (0.05) <.01 | -0.13 (0.06) .02 |
| b | Level \* age | -0.25 (0.05) <.01 | -0.18 (0.05) <.01 | -0.18 (0.05) <.01 | -0.18 (0.05) <.01 |
| b | Level \* education | --- | 0.24 (0.08) <.01 | 0.26 (0.08) <.01 | 0.31 (0.08) <.01 |
| b | Level \* height | --- | --- | -0.94 (2.63) .72 | -1.24 (2.52) .62 |
| b | Level \* smoking | --- | --- | --- | -0.53 (0.37) .15 |
| b | Level \* cardio | --- | --- | --- | 0.39 (0.28) .15 |
| b | Level \* diabetes | --- | --- | --- | -0.36 (0.65) .58 |
| b | Slope \* age | -0.01 (0.01) .19 | -0.01 (0.01) .17 | -0.01 (0.01) .27 | -0.01 (0.01) .28 |
| b | Slope \* education | --- | 0.01 (0.02) .69 | 0.00 (0.02) .81 | 0.01 (0.02) .63 |
| b | Slope \* height | --- | --- | 0.70 (0.55) .20 | 0.69 (0.55) .21 |
| b | Slope \* smoking | --- | --- | --- | -0.07 (0.08) .36 |
| b | Slope \* cardio | --- | --- | --- | -0.10 (0.06) .10 |
| b | Slope \* diabetes | --- | --- | --- | -0.07 (0.13) .59 |
| a | Var (Level) | 4.43 (0.51) <.01 | 3.87 (0.46) <.01 | 3.23 (0.43) <.01 | 3.20 (0.43) <.01 |
| a | Var (Slope) | 0.06 (0.02) .01 | 0.06 (0.02) .01 | 0.05 (0.02) .01 | 0.05 (0.02) .01 |
| a | Var (Residual) | 1.59 (0.15) <.01 | 1.57 (0.14) <.01 | 1.52 (0.14) <.01 | 1.52 (0.14) <.01 |
| b | Var (Level) | 7.89 (0.63) <.01 | 6.77 (0.60) <.01 | 5.87 (0.60) <.01 | 5.68 (0.58) <.01 |
| b | Var (Slope) | 0.13 (0.02) <.01 | 0.14 (0.02) <.01 | 0.14 (0.02) <.01 | 0.13 (0.02) <.01 |
| b | Var (Residual) | 1.89 (0.14) <.01 | 1.93 (0.14) <.01 | 1.91 (0.14) <.01 | 1.91 (0.14) <.01 |
| a | Covar (Level, Slope) | -0.03 (0.07) .69 | -0.06 (0.06) .36 | -0.06 (0.06) .26 | -0.06 (0.06) .28 |
| b | Covar (Level, Slope) | 0.10 (0.08) .21 | 0.11 (0.08) .19 | 0.13 (0.07) .07 | 0.13 (0.07) .07 |
|  | Correlation of Levels | 0.326 | 0.217 | 0.167 | 0.167 |
|  | Correlation of Slopes | 0.562 | 0.592 | 0.634 | 0.622 |
|  | Correlation of Residuals | 0.075 | 0.084 | 0.084 | 0.081 |
|  | N | 456 | 428 | 378 | 376 |
|  | occasions | 5 | 5 | 5 | 5 |
|  | parameters | 21 | 25 | 29 | 41 |
|  | LL | -5,700 | -5,490 | -5,063 | -5,041 |
|  | AIC | 11,443 | 11,030 | 10,184 | 10,164 |
|  | BIC | 11,529 | 11,131 | 10,298 | 10,325 |

## mir\_recog

Gender = *female*; Process (a) = *grip*; Process (b) = *mir\_recog*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| process | label | a | ae | aeh | aehplus |
| ab | Covar (Levels) | 1.81 (0.54) <.01 | 0.75 (0.40) .06 | 0.35 (0.28) .20 | 0.34 (0.26) .20 |
| ab | Covar (Slopes) | 0.09 (0.02) <.01 | 0.09 (0.02) <.01 | 0.08 (0.02) <.01 | 0.07 (0.02) <.01 |
| ab | Covar (Residuals) | 0.32 (0.11) <.01 | 0.33 (0.11) <.01 | 0.30 (0.10) <.01 | 0.30 (0.10) <.01 |
| er | Corr (Levels) | 0.31 (0.07) <.01 | 0.17 (0.08) .04 | 0.11 (0.08) .17 | 0.11 (0.08) .17 |
| er | Corr (Slopes) | 0.70 (0.11) <.01 | 0.73 (0.10) <.01 | 0.73 (0.11) <.01 | 0.71 (0.11) <.01 |
| er | Corr (Residuals) | 0.21 (0.06) <.01 | 0.22 (0.06) <.01 | 0.21 (0.06) <.01 | 0.21 (0.06) <.01 |
| a | Level | 8.58 (0.20) <.01 | 8.67 (0.20) <.01 | 9.09 (0.20) <.01 | 9.16 (0.24) <.01 |
| a | Slope | 9.15 (0.24) <.01 | 9.21 (0.21) <.01 | 9.39 (0.19) <.01 | 9.36 (0.23) <.01 |
| a | Level \* age | -0.21 (0.04) <.01 | -0.19 (0.04) <.01 | -0.17 (0.04) <.01 | -0.18 (0.04) <.01 |
| a | Level \* education | --- | 0.18 (0.06) <.01 | 0.15 (0.06) .02 | 0.15 (0.07) .03 |
| a | Level \* height | --- | --- | 10.22 (2.09) <.01 | 9.94 (2.13) <.01 |
| a | Level \* smoking | --- | --- | --- | -0.09 (0.30) .77 |
| a | Level \* cardio | --- | --- | --- | -0.09 (0.21) .67 |
| a | Level \* diabetes | --- | --- | --- | 0.10 (0.41) .80 |
| a | Slope \* age | -0.01 (0.01) .22 | -0.00 (0.01) .62 | 0.00 (0.01) .85 | 0.00 (0.01) .80 |
| a | Slope \* education | --- | -0.00 (0.01) .96 | 0.00 (0.01) .96 | 0.01 (0.01) .69 |
| a | Slope \* height | --- | --- | -0.28 (0.39) .47 | -0.31 (0.37) .40 |
| a | Slope \* smoking | --- | --- | --- | -0.06 (0.06) .28 |
| a | Slope \* cardio | --- | --- | --- | -0.01 (0.04) .71 |
| a | Slope \* diabetes | --- | --- | --- | -0.08 (0.09) .39 |
| b | Level | -0.45 (0.04) <.01 | -0.45 (0.04) <.01 | -0.45 (0.04) <.01 | -0.42 (0.04) <.01 |
| b | Slope | -0.21 (0.05) <.01 | -0.21 (0.06) <.01 | -0.19 (0.06) <.01 | -0.14 (0.06) .02 |
| b | Level \* age | -0.18 (0.06) <.01 | -0.07 (0.05) .13 | -0.05 (0.04) .27 | -0.05 (0.04) .26 |
| b | Level \* education | --- | 0.20 (0.05) <.01 | 0.21 (0.04) <.01 | 0.26 (0.05) <.01 |
| b | Level \* height | --- | --- | -1.86 (2.04) .36 | -2.19 (1.91) .25 |
| b | Level \* smoking | --- | --- | --- | -0.49 (0.26) .06 |
| b | Level \* cardio | --- | --- | --- | 0.40 (0.21) .06 |
| b | Level \* diabetes | --- | --- | --- | -0.13 (0.45) .78 |
| b | Slope \* age | -0.04 (0.01) <.01 | -0.03 (0.01) .01 | -0.03 (0.01) .03 | -0.03 (0.01) .04 |
| b | Slope \* education | --- | 0.04 (0.01) <.01 | 0.04 (0.01) <.01 | 0.05 (0.01) <.01 |
| b | Slope \* height | --- | --- | 0.37 (0.57) .52 | 0.21 (0.54) .70 |
| b | Slope \* smoking | --- | --- | --- | -0.09 (0.08) .26 |
| b | Slope \* cardio | --- | --- | --- | -0.04 (0.06) .55 |
| b | Slope \* diabetes | --- | --- | --- | -0.20 (0.14) .16 |
| a | Var (Level) | 4.34 (0.51) <.01 | 3.80 (0.45) <.01 | 3.19 (0.42) <.01 | 3.16 (0.43) <.01 |
| a | Var (Slope) | 0.08 (0.02) <.01 | 0.07 (0.02) <.01 | 0.06 (0.02) <.01 | 0.06 (0.02) .01 |
| a | Var (Residual) | 1.58 (0.15) <.01 | 1.56 (0.14) <.01 | 1.52 (0.14) <.01 | 1.52 (0.14) <.01 |
| b | Var (Level) | 8.00 (1.01) <.01 | 5.26 (0.85) <.01 | 3.08 (0.63) <.01 | 2.83 (0.58) <.01 |
| b | Var (Slope) | 0.20 (0.04) <.01 | 0.20 (0.04) <.01 | 0.20 (0.04) <.01 | 0.19 (0.04) <.01 |
| b | Var (Residual) | 1.44 (0.23) <.01 | 1.41 (0.23) <.01 | 1.39 (0.24) <.01 | 1.38 (0.24) <.01 |
| a | Covar (Level, Slope) | 0.02 (0.08) .83 | -0.04 (0.07) .59 | -0.05 (0.06) .41 | -0.05 (0.06) .41 |
| b | Covar (Level, Slope) | 0.56 (0.14) <.01 | 0.51 (0.13) <.01 | 0.41 (0.10) <.01 | 0.36 (0.10) <.01 |
|  | Correlation of Levels | 0.31 | 0.17 | 0.11 | 0.11 |
|  | Correlation of Slopes | 0.70 | 0.74 | 0.73 | 0.72 |
|  | Correlation of Residuals | 0.21 | 0.22 | 0.21 | 0.21 |
|  | N | 456 | 428 | 378 | 376 |
|  | occasions | 5 | 5 | 5 | 5 |
|  | parameters | 21 | 25 | 29 | 41 |
|  | LL | -5,622 | -5,355 | -4,878 | -4,848 |
|  | AIC | 11,285 | 10,760 | 9,814 | 9,778 |
|  | BIC | 11,372 | 10,862 | 9,929 | 9,939 |

## mmse

Gender = *female*; Process (a) = *grip*; Process (b) = *mmse*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| process | label | a | ae | aeh | aehplus |
| ab | Covar (Levels) | 9.13 (1.59) <.01 | 3.48 (1.00) <.01 | 1.06 (0.63) .09 | 0.90 (0.57) .11 |
| ab | Covar (Slopes) | 0.27 (0.06) <.01 | 0.31 (0.07) <.01 | 0.30 (0.07) <.01 | 0.29 (0.07) <.01 |
| ab | Covar (Residuals) | 1.06 (0.28) <.01 | 1.05 (0.28) <.01 | 0.88 (0.27) <.01 | 0.86 (0.27) <.01 |
| er | Corr (Levels) | 0.54 (0.06) <.01 | 0.36 (0.08) <.01 | 0.18 (0.10) .06 | 0.17 (0.10) .07 |
| er | Corr (Slopes) | 0.85 (0.06) <.01 | 0.89 (0.04) <.01 | 0.90 (0.04) <.01 | 0.89 (0.04) <.01 |
| er | Corr (Residuals) | 0.29 (0.06) <.01 | 0.29 (0.06) <.01 | 0.26 (0.06) <.01 | 0.25 (0.06) <.01 |
| a | Level | 8.45 (0.21) <.01 | 8.60 (0.20) <.01 | 9.07 (0.20) <.01 | 9.16 (0.24) <.01 |
| a | Slope | 25.66 (0.59) <.01 | 26.51 (0.42) <.01 | 27.49 (0.38) <.01 | 27.93 (0.42) <.01 |
| a | Level \* age | -0.23 (0.04) <.01 | -0.19 (0.04) <.01 | -0.17 (0.04) <.01 | -0.18 (0.04) <.01 |
| a | Level \* education | --- | 0.18 (0.06) <.01 | 0.15 (0.06) .02 | 0.15 (0.07) .03 |
| a | Level \* height | --- | --- | 9.90 (2.06) <.01 | 9.87 (2.10) <.01 |
| a | Level \* smoking | --- | --- | --- | -0.10 (0.30) .74 |
| a | Level \* cardio | --- | --- | --- | -0.08 (0.21) .70 |
| a | Level \* diabetes | --- | --- | --- | 0.10 (0.42) .81 |
| a | Slope \* age | -0.02 (0.01) .07 | -0.01 (0.01) .19 | -0.00 (0.01) .63 | -0.00 (0.01) .60 |
| a | Slope \* education | --- | -0.00 (0.01) .82 | -0.00 (0.01) .80 | 0.00 (0.01) .86 |
| a | Slope \* height | --- | --- | -0.47 (0.38) .21 | -0.37 (0.36) .30 |
| a | Slope \* smoking | --- | --- | --- | -0.07 (0.06) .22 |
| a | Slope \* cardio | --- | --- | --- | -0.02 (0.04) .62 |
| a | Slope \* diabetes | --- | --- | --- | -0.04 (0.09) .66 |
| b | Level | -0.44 (0.04) <.01 | -0.45 (0.04) <.01 | -0.47 (0.04) <.01 | -0.43 (0.04) <.01 |
| b | Slope | -0.68 (0.12) <.01 | -0.79 (0.13) <.01 | -0.85 (0.14) <.01 | -0.70 (0.17) <.01 |
| b | Level \* age | -0.46 (0.12) <.01 | -0.19 (0.08) .01 | -0.17 (0.07) .02 | -0.18 (0.07) .01 |
| b | Level \* education | --- | 0.57 (0.10) <.01 | 0.49 (0.09) <.01 | 0.60 (0.09) <.01 |
| b | Level \* height | --- | --- | 2.23 (4.37) .61 | 3.66 (3.79) .34 |
| b | Level \* smoking | --- | --- | --- | -1.01 (0.50) .04 |
| b | Level \* cardio | --- | --- | --- | 0.20 (0.42) .63 |
| b | Level \* diabetes | --- | --- | --- | -1.28 (0.91) .16 |
| b | Slope \* age | -0.11 (0.03) <.01 | -0.10 (0.03) <.01 | -0.07 (0.03) .02 | -0.08 (0.03) .02 |
| b | Slope \* education | --- | 0.09 (0.04) .02 | 0.10 (0.04) .02 | 0.12 (0.04) .01 |
| b | Slope \* height | --- | --- | -0.85 (1.37) .53 | -0.41 (1.34) .76 |
| b | Slope \* smoking | --- | --- | --- | -0.34 (0.20) .09 |
| b | Slope \* cardio | --- | --- | --- | -0.07 (0.17) .69 |
| b | Slope \* diabetes | --- | --- | --- | -0.05 (0.25) .84 |
| a | Var (Level) | 4.99 (0.57) <.01 | 4.01 (0.46) <.01 | 3.22 (0.41) <.01 | 3.17 (0.41) <.01 |
| a | Var (Slope) | 0.08 (0.02) <.01 | 0.08 (0.02) <.01 | 0.07 (0.02) <.01 | 0.07 (0.02) <.01 |
| a | Var (Residual) | 1.58 (0.14) <.01 | 1.56 (0.14) <.01 | 1.52 (0.14) <.01 | 1.52 (0.14) <.01 |
| b | Var (Level) | 56.54 (6.33) <.01 | 22.84 (3.76) <.01 | 10.68 (2.14) <.01 | 8.79 (1.88) <.01 |
| b | Var (Slope) | 1.23 (0.22) <.01 | 1.46 (0.27) <.01 | 1.56 (0.31) <.01 | 1.52 (0.31) <.01 |
| b | Var (Residual) | 8.49 (0.98) <.01 | 8.30 (0.98) <.01 | 7.66 (0.92) <.01 | 7.59 (0.91) <.01 |
| a | Covar (Level, Slope) | 0.03 (0.08) .72 | -0.01 (0.06) .84 | -0.01 (0.06) .80 | -0.01 (0.06) .82 |
| b | Covar (Level, Slope) | 2.79 (0.66) <.01 | 3.23 (0.56) <.01 | 3.11 (0.54) <.01 | 2.83 (0.52) <.01 |
|  | Correlation of Levels | 0.54 | 0.36 | 0.18 | 0.17 |
|  | Correlation of Slopes | 0.85 | 0.89 | 0.90 | 0.89 |
|  | Correlation of Residuals | 0.29 | 0.29 | 0.26 | 0.25 |
|  | N | 487 | 444 | 384 | 380 |
|  | occasions | 5 | 5 | 5 | 5 |
|  | parameters | 21 | 25 | 29 | 41 |
|  | LL | -7,551 | -7,011 | -6,283 | -6,226 |
|  | AIC | 15,143 | 14,071 | 12,623 | 12,534 |
|  | BIC | 15,231 | 14,174 | 12,738 | 12,695 |

## prose\_im

Gender = *female*; Process (a) = *grip*; Process (b) = *prose\_im*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| process | label | a | ae | aeh | aehplus |
| ab | Covar (Levels) | 3.08 (0.70) <.01 | 1.81 (0.59) <.01 | 0.97 (0.51) .06 | 0.97 (0.50) .05 |
| ab | Covar (Slopes) | 0.07 (0.03) .01 | 0.07 (0.03) .01 | 0.06 (0.03) .02 | 0.06 (0.02) .01 |
| ab | Covar (Residuals) | 0.40 (0.18) .02 | 0.40 (0.18) .02 | 0.39 (0.18) .03 | 0.38 (0.18) .03 |
| er | Corr (Levels) | 0.36 (0.07) <.01 | 0.25 (0.08) <.01 | 0.16 (0.08) .05 | 0.16 (0.08) .04 |
| er | Corr (Slopes) | 0.61 (0.14) <.01 | 0.62 (0.14) <.01 | 0.62 (0.15) <.01 | 0.61 (0.16) <.01 |
| er | Corr (Residuals) | 0.14 (0.06) .01 | 0.14 (0.06) .01 | 0.14 (0.06) .02 | 0.14 (0.06) .02 |
| a | Level | 8.55 (0.21) <.01 | 8.64 (0.20) <.01 | 9.07 (0.20) <.01 | 9.14 (0.24) <.01 |
| a | Slope | 9.73 (0.41) <.01 | 9.83 (0.37) <.01 | 10.31 (0.38) <.01 | 10.18 (0.44) <.01 |
| a | Level \* age | -0.21 (0.04) <.01 | -0.19 (0.04) <.01 | -0.17 (0.04) <.01 | -0.17 (0.04) <.01 |
| a | Level \* education | --- | 0.19 (0.06) <.01 | 0.16 (0.06) .02 | 0.16 (0.07) .02 |
| a | Level \* height | --- | --- | 10.36 (2.10) <.01 | 10.09 (2.14) <.01 |
| a | Level \* smoking | --- | --- | --- | -0.11 (0.30) .72 |
| a | Level \* cardio | --- | --- | --- | -0.08 (0.21) .71 |
| a | Level \* diabetes | --- | --- | --- | 0.12 (0.41) .77 |
| a | Slope \* age | -0.01 (0.01) .33 | -0.00 (0.01) .51 | 0.00 (0.01) .98 | 0.00 (0.01) .96 |
| a | Slope \* education | --- | -0.01 (0.01) .63 | -0.00 (0.01) .74 | 0.00 (0.01) .99 |
| a | Slope \* height | --- | --- | -0.27 (0.37) .46 | -0.25 (0.36) .48 |
| a | Slope \* smoking | --- | --- | --- | -0.07 (0.06) .23 |
| a | Slope \* cardio | --- | --- | --- | -0.02 (0.04) .55 |
| a | Slope \* diabetes | --- | --- | --- | -0.07 (0.09) .43 |
| b | Level | -0.44 (0.04) <.01 | -0.43 (0.04) <.01 | -0.44 (0.04) <.01 | -0.41 (0.04) <.01 |
| b | Slope | -0.30 (0.07) <.01 | -0.30 (0.07) <.01 | -0.29 (0.07) <.01 | -0.14 (0.08) .08 |
| b | Level \* age | -0.35 (0.08) <.01 | -0.27 (0.08) <.01 | -0.27 (0.08) <.01 | -0.25 (0.08) <.01 |
| b | Level \* education | --- | 0.66 (0.10) <.01 | 0.67 (0.10) <.01 | 0.72 (0.10) <.01 |
| b | Level \* height | --- | --- | 2.21 (3.78) .56 | 0.87 (3.80) .82 |
| b | Level \* smoking | --- | --- | --- | -0.43 (0.53) .42 |
| b | Level \* cardio | --- | --- | --- | 0.70 (0.40) .08 |
| b | Level \* diabetes | --- | --- | --- | -1.78 (0.94) .06 |
| b | Slope \* age | -0.00 (0.02) .93 | -0.00 (0.02) .94 | 0.00 (0.02) .99 | -0.00 (0.02) .89 |
| b | Slope \* education | --- | -0.00 (0.02) .83 | -0.00 (0.02) .95 | 0.01 (0.02) .67 |
| b | Slope \* height | --- | --- | 0.27 (0.93) .78 | 0.47 (0.95) .62 |
| b | Slope \* smoking | --- | --- | --- | -0.22 (0.10) .04 |
| b | Slope \* cardio | --- | --- | --- | -0.20 (0.09) .03 |
| b | Slope \* diabetes | --- | --- | --- | 0.05 (0.16) .73 |
| a | Var (Level) | 4.45 (0.52) <.01 | 3.88 (0.46) <.01 | 3.23 (0.43) <.01 | 3.19 (0.44) <.01 |
| a | Var (Slope) | 0.06 (0.02) .01 | 0.05 (0.02) .01 | 0.05 (0.02) .01 | 0.05 (0.02) .02 |
| a | Var (Residual) | 1.59 (0.15) <.01 | 1.57 (0.15) <.01 | 1.53 (0.15) <.01 | 1.53 (0.15) <.01 |
| b | Var (Level) | 16.36 (1.28) <.01 | 13.09 (1.17) <.01 | 11.36 (1.14) <.01 | 10.75 (1.11) <.01 |
| b | Var (Slope) | 0.22 (0.04) <.01 | 0.22 (0.05) <.01 | 0.21 (0.04) <.01 | 0.20 (0.04) <.01 |
| b | Var (Residual) | 4.97 (0.38) <.01 | 5.04 (0.39) <.01 | 5.02 (0.39) <.01 | 4.99 (0.38) <.01 |
| a | Covar (Level, Slope) | -0.03 (0.08) .70 | -0.06 (0.07) .41 | -0.06 (0.06) .32 | -0.06 (0.06) .35 |
| b | Covar (Level, Slope) | 0.03 (0.19) .86 | 0.00 (0.18) .99 | -0.03 (0.16) .86 | -0.01 (0.15) .95 |
|  | Correlation of Levels | 0.36 | 0.25 | 0.16 | 0.17 |
|  | Correlation of Slopes | 0.61 | 0.63 | 0.62 | 0.61 |
|  | Correlation of Residuals | 0.14 | 0.14 | 0.14 | 0.14 |
|  | N | 457 | 432 | 378 | 376 |
|  | occasions | 5 | 5 | 5 | 5 |
|  | parameters | 21 | 25 | 29 | 41 |
|  | LL | -5,972 | -5,770 | -5,310 | -5,281 |
|  | AIC | 11,986 | 11,591 | 10,679 | 10,643 |
|  | BIC | 12,073 | 11,692 | 10,793 | 10,805 |

## psif

Gender = *female*; Process (a) = *grip*; Process (b) = *psif*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| process | label | a | ae | aeh | aehplus |
| ab | Covar (Levels) | --- | --- | --- | --- |
| ab | Covar (Slopes) | --- | --- | --- | --- |
| ab | Covar (Residuals) | --- | --- | --- | --- |
| er | Corr (Levels) | --- | --- | --- | --- |
| er | Corr (Slopes) | --- | --- | --- | --- |
| er | Corr (Residuals) | --- | --- | --- | --- |
| a | Level | --- | --- | --- | --- |
| a | Slope | --- | --- | --- | --- |
| a | Level \* age | --- | --- | --- | --- |
| a | Level \* education | --- | --- | --- | --- |
| a | Level \* height | --- | --- | --- | --- |
| a | Level \* smoking | --- | --- | --- | --- |
| a | Level \* cardio | --- | --- | --- | --- |
| a | Level \* diabetes | --- | --- | --- | --- |
| a | Slope \* age | --- | --- | --- | --- |
| a | Slope \* education | --- | --- | --- | --- |
| a | Slope \* height | --- | --- | --- | --- |
| a | Slope \* smoking | --- | --- | --- | --- |
| a | Slope \* cardio | --- | --- | --- | --- |
| a | Slope \* diabetes | --- | --- | --- | --- |
| b | Level | --- | --- | --- | --- |
| b | Slope | --- | --- | --- | --- |
| b | Level \* age | --- | --- | --- | --- |
| b | Level \* education | --- | --- | --- | --- |
| b | Level \* height | --- | --- | --- | --- |
| b | Level \* smoking | --- | --- | --- | --- |
| b | Level \* cardio | --- | --- | --- | --- |
| b | Level \* diabetes | --- | --- | --- | --- |
| b | Slope \* age | --- | --- | --- | --- |
| b | Slope \* education | --- | --- | --- | --- |
| b | Slope \* height | --- | --- | --- | --- |
| b | Slope \* smoking | --- | --- | --- | --- |
| b | Slope \* cardio | --- | --- | --- | --- |
| b | Slope \* diabetes | --- | --- | --- | --- |
| a | Var (Level) | --- | --- | --- | --- |
| a | Var (Slope) | --- | --- | --- | --- |
| a | Var (Residual) | --- | --- | --- | --- |
| b | Var (Level) | --- | --- | --- | --- |
| b | Var (Slope) | --- | --- | --- | --- |
| b | Var (Residual) | --- | --- | --- | --- |
| a | Covar (Level, Slope) | --- | --- | --- | --- |
| b | Covar (Level, Slope) | --- | --- | --- | --- |
|  | Correlation of Levels | NaN | NaN | NaN | NaN |
|  | Correlation of Slopes | NaN | NaN | NaN | NaN |
|  | Correlation of Residuals | NaN | NaN | NaN | NaN |
|  | N | NA | NA | NA | NA |
|  | occasions | NA | NA | NA | NA |
|  | parameters | NA | NA | NA | NA |
|  | LL | NA | NA | NA | NA |
|  | AIC | NA | NA | NA | NA |
|  | BIC | NA | NA | NA | NA |

## symbol

Gender = *female*; Process (a) = *grip*; Process (b) = *symbol*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| process | label | a | ae | aeh | aehplus |
| ab | Covar (Levels) | 7.57 (1.92) <.01 | 4.34 (1.54) <.01 | 2.43 (1.37) .08 | 2.44 (1.31) .06 |
| ab | Covar (Slopes) | 0.06 (0.04) .13 | 0.07 (0.04) .10 | 0.07 (0.04) .08 | 0.06 (0.04) .10 |
| ab | Covar (Residuals) | 1.13 (0.36) <.01 | 1.10 (0.35) <.01 | 1.02 (0.35) <.01 | 0.99 (0.34) <.01 |
| er | Corr (Levels) | 0.34 (0.07) <.01 | 0.23 (0.08) <.01 | 0.15 (0.08) .07 | 0.15 (0.08) .05 |
| er | Corr (Slopes) | 0.34 (0.20) .08 | 0.38 (0.19) .05 | 0.40 (0.19) .04 | 0.40 (0.21) .06 |
| er | Corr (Residuals) | 0.16 (0.05) <.01 | 0.16 (0.05) <.01 | 0.15 (0.05) <.01 | 0.15 (0.05) <.01 |
| a | Level | 8.53 (0.21) <.01 | 8.63 (0.20) <.01 | 9.06 (0.20) <.01 | 9.13 (0.24) <.01 |
| a | Slope | 25.21 (1.13) <.01 | 25.34 (1.00) <.01 | 26.32 (1.04) <.01 | 25.97 (1.24) <.01 |
| a | Level \* age | -0.20 (0.04) <.01 | -0.19 (0.04) <.01 | -0.17 (0.04) <.01 | -0.17 (0.04) <.01 |
| a | Level \* education | --- | 0.19 (0.06) <.01 | 0.15 (0.06) .02 | 0.16 (0.07) .02 |
| a | Level \* height | --- | --- | 10.34 (2.10) <.01 | 10.03 (2.13) <.01 |
| a | Level \* smoking | --- | --- | --- | -0.11 (0.30) .72 |
| a | Level \* cardio | --- | --- | --- | -0.07 (0.21) .74 |
| a | Level \* diabetes | --- | --- | --- | 0.12 (0.41) .76 |
| a | Slope \* age | -0.01 (0.01) .31 | -0.01 (0.01) .41 | 0.00 (0.01) .92 | 0.00 (0.01) .90 |
| a | Slope \* education | --- | -0.01 (0.01) .59 | -0.01 (0.01) .67 | -0.00 (0.01) .90 |
| a | Slope \* height | --- | --- | -0.24 (0.36) .50 | -0.22 (0.35) .52 |
| a | Slope \* smoking | --- | --- | --- | -0.07 (0.06) .24 |
| a | Slope \* cardio | --- | --- | --- | -0.03 (0.04) .43 |
| a | Slope \* diabetes | --- | --- | --- | -0.06 (0.09) .49 |
| b | Level | -0.41 (0.03) <.01 | -0.41 (0.03) <.01 | -0.43 (0.04) <.01 | -0.40 (0.04) <.01 |
| b | Slope | -0.71 (0.15) <.01 | -0.70 (0.15) <.01 | -0.74 (0.16) <.01 | -0.36 (0.18) .05 |
| b | Level \* age | -1.00 (0.23) <.01 | -0.84 (0.23) <.01 | -0.76 (0.26) <.01 | -0.75 (0.25) <.01 |
| b | Level \* education | --- | 2.12 (0.32) <.01 | 2.20 (0.33) <.01 | 2.37 (0.35) <.01 |
| b | Level \* height | --- | --- | 12.33 (11.53) .28 | 10.24 (11.15) .36 |
| b | Level \* smoking | --- | --- | --- | -1.57 (1.49) .29 |
| b | Level \* cardio | --- | --- | --- | 1.81 (1.14) .11 |
| b | Level \* diabetes | --- | --- | --- | -2.71 (2.55) .29 |
| b | Slope \* age | -0.05 (0.04) .17 | -0.05 (0.04) .21 | -0.03 (0.04) .39 | -0.04 (0.04) .34 |
| b | Slope \* education | --- | 0.00 (0.06) .97 | -0.01 (0.06) .91 | 0.01 (0.06) .88 |
| b | Slope \* height | --- | --- | 0.76 (1.83) .68 | 1.02 (1.82) .57 |
| b | Slope \* smoking | --- | --- | --- | -0.52 (0.24) .03 |
| b | Slope \* cardio | --- | --- | --- | -0.62 (0.19) <.01 |
| b | Slope \* diabetes | --- | --- | --- | 0.26 (0.58) .66 |
| a | Var (Level) | 4.42 (0.52) <.01 | 3.85 (0.46) <.01 | 3.19 (0.43) <.01 | 3.16 (0.44) <.01 |
| a | Var (Slope) | 0.05 (0.02) .03 | 0.04 (0.02) .03 | 0.04 (0.02) .03 | 0.04 (0.02) .03 |
| a | Var (Residual) | 1.63 (0.15) <.01 | 1.61 (0.15) <.01 | 1.56 (0.15) <.01 | 1.56 (0.15) <.01 |
| b | Var (Level) | 112.49 (9.54) <.01 | 88.19 (7.58) <.01 | 80.69 (7.45) <.01 | 78.19 (7.27) <.01 |
| b | Var (Slope) | 0.66 (0.17) <.01 | 0.67 (0.18) <.01 | 0.68 (0.18) <.01 | 0.54 (0.17) <.01 |
| b | Var (Residual) | 28.68 (2.08) <.01 | 28.82 (2.08) <.01 | 28.60 (2.06) <.01 | 28.59 (2.07) <.01 |
| a | Covar (Level, Slope) | -0.03 (0.07) .64 | -0.06 (0.07) .39 | -0.06 (0.06) .35 | -0.05 (0.06) .36 |
| b | Covar (Level, Slope) | -0.56 (1.04) .59 | -0.67 (0.97) .49 | -0.45 (0.91) .62 | -0.02 (0.90) .99 |
|  | Correlation of Levels | 0.34 | 0.24 | 0.15 | 0.15 |
|  | Correlation of Slopes | 0.35 | 0.38 | 0.40 | 0.40 |
|  | Correlation of Residuals | 0.17 | 0.16 | 0.15 | 0.15 |
|  | N | 445 | 423 | 376 | 374 |
|  | occasions | 5 | 5 | 5 | 5 |
|  | parameters | 21 | 25 | 29 | 41 |
|  | LL | -6,352 | -6,176 | -5,785 | -5,762 |
|  | AIC | 12,745 | 12,401 | 11,628 | 11,605 |
|  | BIC | 12,831 | 12,502 | 11,742 | 11,766 |

## synonyms

Gender = *female*; Process (a) = *grip*; Process (b) = *synonyms*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| process | label | a | ae | aeh | aehplus |
| ab | Covar (Levels) | 2.73 (0.92) <.01 | 1.40 (0.71) .05 | 0.79 (0.65) .22 | 0.81 (0.65) .21 |
| ab | Covar (Slopes) | 0.07 (0.03) .02 | 0.08 (0.03) .01 | 0.07 (0.03) .01 | 0.07 (0.03) .01 |
| ab | Covar (Residuals) | -0.11 (0.20) .57 | -0.11 (0.20) .57 | -0.04 (0.19) .83 | -0.04 (0.19) .82 |
| er | Corr (Levels) | 0.25 (0.08) <.01 | 0.16 (0.08) .04 | 0.10 (0.08) .22 | 0.11 (0.08) .20 |
| er | Corr (Slopes) | 0.77 (0.19) <.01 | 0.82 (0.18) <.01 | 0.78 (0.19) <.01 | 0.79 (0.19) <.01 |
| er | Corr (Residuals) | -0.03 (0.06) .57 | -0.03 (0.06) .56 | -0.01 (0.06) .83 | -0.01 (0.06) .82 |
| a | Level | 8.52 (0.21) <.01 | 8.62 (0.20) <.01 | 9.05 (0.20) <.01 | 9.12 (0.24) <.01 |
| a | Slope | 16.48 (0.63) <.01 | 16.37 (0.55) <.01 | 16.65 (0.54) <.01 | 16.34 (0.68) <.01 |
| a | Level \* age | -0.20 (0.04) <.01 | -0.19 (0.04) <.01 | -0.17 (0.04) <.01 | -0.17 (0.04) <.01 |
| a | Level \* education | --- | 0.19 (0.06) <.01 | 0.15 (0.06) .02 | 0.15 (0.07) .02 |
| a | Level \* height | --- | --- | 10.30 (2.09) <.01 | 10.00 (2.13) <.01 |
| a | Level \* smoking | --- | --- | --- | -0.12 (0.30) .68 |
| a | Level \* cardio | --- | --- | --- | -0.07 (0.21) .74 |
| a | Level \* diabetes | --- | --- | --- | 0.12 (0.40) .77 |
| a | Slope \* age | -0.01 (0.01) .32 | -0.01 (0.01) .42 | 0.00 (0.01) .94 | 0.00 (0.01) .88 |
| a | Slope \* education | --- | -0.01 (0.01) .59 | -0.00 (0.01) .74 | -0.00 (0.01) .93 |
| a | Slope \* height | --- | --- | -0.31 (0.36) .38 | -0.30 (0.35) .39 |
| a | Slope \* smoking | --- | --- | --- | -0.05 (0.06) .38 |
| a | Slope \* cardio | --- | --- | --- | -0.03 (0.04) .50 |
| a | Slope \* diabetes | --- | --- | --- | -0.07 (0.09) .45 |
| b | Level | -0.40 (0.04) <.01 | -0.40 (0.03) <.01 | -0.42 (0.04) <.01 | -0.39 (0.04) <.01 |
| b | Slope | -0.19 (0.08) .02 | -0.20 (0.08) .01 | -0.20 (0.09) .03 | -0.13 (0.10) .19 |
| b | Level \* age | -0.16 (0.15) .27 | -0.10 (0.13) .44 | -0.06 (0.13) .65 | -0.02 (0.13) .85 |
| b | Level \* education | --- | 1.36 (0.13) <.01 | 1.38 (0.12) <.01 | 1.35 (0.12) <.01 |
| b | Level \* height | --- | --- | 11.30 (5.85) .05 | 10.42 (5.82) .07 |
| b | Level \* smoking | --- | --- | --- | 0.56 (0.68) .41 |
| b | Level \* cardio | --- | --- | --- | 0.47 (0.60) .43 |
| b | Level \* diabetes | --- | --- | --- | -2.48 (1.18) .04 |
| b | Slope \* age | -0.01 (0.02) .71 | -0.00 (0.02) .81 | -0.00 (0.02) .96 | 0.00 (0.02) .94 |
| b | Slope \* education | --- | 0.00 (0.03) .91 | 0.01 (0.03) .82 | 0.02 (0.03) .49 |
| b | Slope \* height | --- | --- | -0.02 (1.02) .99 | -0.08 (1.01) .94 |
| b | Slope \* smoking | --- | --- | --- | -0.15 (0.15) .29 |
| b | Slope \* cardio | --- | --- | --- | -0.08 (0.11) .46 |
| b | Slope \* diabetes | --- | --- | --- | -0.18 (0.21) .39 |
| a | Var (Level) | 4.42 (0.52) <.01 | 3.86 (0.46) <.01 | 3.20 (0.43) <.01 | 3.17 (0.43) <.01 |
| a | Var (Slope) | 0.05 (0.02) .03 | 0.05 (0.02) .03 | 0.04 (0.02) .03 | 0.04 (0.02) .03 |
| a | Var (Residual) | 1.64 (0.16) <.01 | 1.61 (0.15) <.01 | 1.55 (0.15) <.01 | 1.55 (0.15) <.01 |
| b | Var (Level) | 27.94 (2.62) <.01 | 20.15 (2.26) <.01 | 18.53 (2.13) <.01 | 18.04 (2.11) <.01 |
| b | Var (Slope) | 0.20 (0.07) <.01 | 0.21 (0.07) <.01 | 0.21 (0.07) <.01 | 0.20 (0.07) <.01 |
| b | Var (Residual) | 6.95 (0.52) <.01 | 6.94 (0.51) <.01 | 6.90 (0.53) <.01 | 6.89 (0.53) <.01 |
| a | Covar (Level, Slope) | -0.04 (0.07) .53 | -0.07 (0.07) .30 | -0.06 (0.06) .32 | -0.06 (0.06) .33 |
| b | Covar (Level, Slope) | -0.16 (0.32) .61 | -0.14 (0.26) .59 | -0.14 (0.26) .57 | -0.10 (0.27) .71 |
|  | Correlation of Levels | 0.246 | 0.158 | 0.103 | 0.108 |
|  | Correlation of Slopes | 0.765 | 0.820 | 0.790 | 0.796 |
|  | Correlation of Residuals | -0.033 | -0.034 | -0.012 | -0.013 |
|  | N | 444 | 423 | 375 | 373 |
|  | occasions | 5 | 5 | 5 | 5 |
|  | parameters | 21 | 25 | 29 | 41 |
|  | LL | -5,437 | -5,282 | -4,936 | -4,922 |
|  | AIC | 10,917 | 10,614 | 9,931 | 9,925 |
|  | BIC | 11,003 | 10,716 | 10,044 | 10,086 |

## Summary

Study = *OCTO*; Gender = *female*; Process (a) = *grip*

Computed correlations:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| label | process\_b | a | ae | aeh | aehplus |
| Correlation of Levels | block | 0.42 | 0.33 | 0.26 | 0.26 |
| Correlation of Levels | clock | 0.49 | 0.36 | 0.26 | 0.26 |
| Correlation of Levels | digit\_b | 0.31 | 0.17 | 0.08 | 0.09 |
| Correlation of Levels | digit\_f | 0.29 | 0.12 | 0.10 | 0.10 |
| Correlation of Levels | fig\_logic | 0.41 | 0.35 | 0.27 | 0.27 |
| Correlation of Levels | information | 0.31 | 0.22 | 0.16 | 0.17 |
| Correlation of Levels | mir | 0.33 | 0.22 | 0.17 | 0.17 |
| Correlation of Levels | mir\_recog | 0.31 | 0.17 | 0.11 | 0.11 |
| Correlation of Levels | mmse | 0.54 | 0.36 | 0.18 | 0.17 |
| Correlation of Levels | prose\_im | 0.36 | 0.25 | 0.16 | 0.17 |
| Correlation of Levels | psif | . | . | . | . |
| Correlation of Levels | symbol | 0.34 | 0.24 | 0.15 | 0.15 |
| Correlation of Levels | synonyms | 0.25 | 0.16 | 0.10 | 0.11 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| label | process\_b | a | ae | aeh | aehplus |
| Correlation of Slopes | block | 0.59 | 0.61 | 0.62 | 0.63 |
| Correlation of Slopes | clock | 0.59 | 0.74 | 0.81 | 0.82 |
| Correlation of Slopes | digit\_b | 0.40 | 0.43 | 0.36 | 0.34 |
| Correlation of Slopes | digit\_f | 0.79 | 0.72 | 0.66 | 0.63 |
| Correlation of Slopes | fig\_logic | 0.89 | 0.87 | 0.90 | 0.97 |
| Correlation of Slopes | information | 0.86 | 0.85 | 0.85 | 0.88 |
| Correlation of Slopes | mir | 0.56 | 0.59 | 0.63 | 0.62 |
| Correlation of Slopes | mir\_recog | 0.70 | 0.74 | 0.73 | 0.72 |
| Correlation of Slopes | mmse | 0.85 | 0.89 | 0.90 | 0.89 |
| Correlation of Slopes | prose\_im | 0.61 | 0.63 | 0.62 | 0.61 |
| Correlation of Slopes | psif | . | . | . | . |
| Correlation of Slopes | symbol | 0.35 | 0.38 | 0.40 | 0.40 |
| Correlation of Slopes | synonyms | 0.77 | 0.82 | 0.79 | 0.80 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| label | process\_b | a | ae | aeh | aehplus |
| Correlation of Residuals | block | 0.11 | 0.11 | 0.11 | 0.10 |
| Correlation of Residuals | clock | 0.23 | 0.22 | 0.20 | 0.20 |
| Correlation of Residuals | digit\_b | 0.14 | 0.14 | 0.12 | 0.11 |
| Correlation of Residuals | digit\_f | 0.13 | 0.12 | 0.08 | 0.08 |
| Correlation of Residuals | fig\_logic | 0.05 | 0.05 | 0.04 | 0.04 |
| Correlation of Residuals | information | 0.01 | 0.01 | 0.01 | 0.01 |
| Correlation of Residuals | mir | 0.07 | 0.08 | 0.08 | 0.08 |
| Correlation of Residuals | mir\_recog | 0.21 | 0.22 | 0.21 | 0.21 |
| Correlation of Residuals | mmse | 0.29 | 0.29 | 0.26 | 0.25 |
| Correlation of Residuals | prose\_im | 0.14 | 0.14 | 0.14 | 0.14 |
| Correlation of Residuals | psif | . | . | . | . |
| Correlation of Residuals | symbol | 0.17 | 0.16 | 0.15 | 0.15 |
| Correlation of Residuals | synonyms | -0.03 | -0.03 | -0.01 | -0.01 |

P-values for corresponding covariances:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| label | process\_b | a | ae | aeh | aehplus |
| Covariance of Levels | block | 0.00 | 0.00 | 0.00 | 0.00 |
| Covariance of Levels | clock | 0.00 | 0.00 | 0.02 | 0.02 |
| Covariance of Levels | digit\_b | 0.00 | 0.10 | 0.47 | 0.43 |
| Covariance of Levels | digit\_f | 0.00 | 0.26 | 0.40 | 0.40 |
| Covariance of Levels | fig\_logic | 0.00 | 0.00 | 0.00 | 0.00 |
| Covariance of Levels | information | 0.00 | 0.00 | 0.01 | 0.01 |
| Covariance of Levels | mir | 0.00 | 0.00 | 0.02 | 0.02 |
| Covariance of Levels | mir\_recog | 0.00 | 0.06 | 0.20 | 0.20 |
| Covariance of Levels | mmse | 0.00 | 0.00 | 0.09 | 0.11 |
| Covariance of Levels | prose\_im | 0.00 | 0.00 | 0.06 | 0.05 |
| Covariance of Levels | psif | . | . | . | . |
| Covariance of Levels | symbol | 0.00 | 0.00 | 0.08 | 0.06 |
| Covariance of Levels | synonyms | 0.00 | 0.05 | 0.22 | 0.21 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| label | process\_b | a | ae | aeh | aehplus |
| Covariance of Slopes | block | 0.01 | 0.01 | 0.00 | 0.00 |
| Covariance of Slopes | clock | 0.00 | 0.00 | 0.00 | 0.00 |
| Covariance of Slopes | digit\_b | 0.24 | 0.25 | 0.38 | 0.42 |
| Covariance of Slopes | digit\_f | 0.00 | 0.01 | 0.02 | 0.02 |
| Covariance of Slopes | fig\_logic | 0.09 | 0.07 | 0.07 | 0.06 |
| Covariance of Slopes | information | 0.00 | 0.00 | 0.00 | 0.00 |
| Covariance of Slopes | mir | 0.00 | 0.00 | 0.00 | 0.00 |
| Covariance of Slopes | mir\_recog | 0.00 | 0.00 | 0.00 | 0.00 |
| Covariance of Slopes | mmse | 0.00 | 0.00 | 0.00 | 0.00 |
| Covariance of Slopes | prose\_im | 0.01 | 0.01 | 0.02 | 0.01 |
| Covariance of Slopes | psif | . | . | . | . |
| Covariance of Slopes | symbol | 0.13 | 0.10 | 0.08 | 0.10 |
| Covariance of Slopes | synonyms | 0.02 | 0.01 | 0.01 | 0.01 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| label | process\_b | a | ae | aeh | aehplus |
| Covariance of Residuals | block | 0.01 | 0.01 | 0.02 | 0.02 |
| Covariance of Residuals | clock | 0.00 | 0.00 | 0.00 | 0.00 |
| Covariance of Residuals | digit\_b | 0.00 | 0.00 | 0.02 | 0.02 |
| Covariance of Residuals | digit\_f | 0.02 | 0.03 | 0.11 | 0.12 |
| Covariance of Residuals | fig\_logic | 0.27 | 0.28 | 0.45 | 0.42 |
| Covariance of Residuals | information | 0.82 | 0.77 | 0.83 | 0.89 |
| Covariance of Residuals | mir | 0.09 | 0.06 | 0.07 | 0.07 |
| Covariance of Residuals | mir\_recog | 0.00 | 0.00 | 0.00 | 0.00 |
| Covariance of Residuals | mmse | 0.00 | 0.00 | 0.00 | 0.00 |
| Covariance of Residuals | prose\_im | 0.02 | 0.02 | 0.03 | 0.03 |
| Covariance of Residuals | psif | . | . | . | . |
| Covariance of Residuals | symbol | 0.00 | 0.00 | 0.00 | 0.00 |
| Covariance of Residuals | synonyms | 0.57 | 0.57 | 0.83 | 0.82 |

# male

Gender = *male*; Model type: *aehplus*; Process (a) = *grip*; Process (b): *block*, *clock*, *digit\_b*, *digit\_f*, *fig\_logic*, *information*, *mir*, *mir\_recog*, *mmse*, *prose\_im*, *psif*, *symbol*, *synonyms*

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| process | label | block | clock | digit\_b | digit\_f | fig\_logic | information | mir | mir\_recog | mmse | prose\_im | psif | symbol | synonyms | mean(sd) |
| ab | Covar (Levels) | 7.65 (1.37) <.01 | 3.66 (0.93) <.01 | 0.75 (0.28) .01 | 0.30 (0.30) .33 | 4.51 (0.96) <.01 | 7.65 (2.31) <.01 | 2.85 (0.58) <.01 | 2.10 (0.55) <.01 | 4.61 (1.15) <.01 | 4.53 (0.89) <.01 | --- | 11.62 (2.36) <.01 | 3.01 (1.04) <.01 | --- |
| ab | Covar (Slopes) | 0.16 (0.07) .03 | 0.17 (0.07) .01 | 0.04 (0.02) .04 | 0.03 (0.02) .07 | 0.10 (0.09) .23 | 0.32 (0.15) .04 | 0.09 (0.03) <.01 | 0.13 (0.04) <.01 | 0.40 (0.12) <.01 | 0.14 (0.07) .04 | --- | 0.41 (0.15) .01 | 0.09 (0.07) .18 | --- |
| ab | Covar (Residuals) | 0.67 (0.32) .04 | 0.66 (0.23) <.01 | -0.03 (0.10) .76 | -0.05 (0.07) .51 | -0.30 (0.31) .32 | 0.70 (0.38) .07 | 0.05 (0.16) .74 | 0.17 (0.15) .26 | 0.79 (0.30) .01 | 0.27 (0.24) .27 | --- | 0.47 (0.40) .24 | 0.09 (0.22) .68 | --- |
| er | Corr (Levels) | 0.49 (0.06) <.01 | 0.55 (0.08) <.01 | 0.34 (0.12) .01 | 0.14 (0.14) .31 | 0.64 (0.11) <.01 | 0.32 (0.09) <.01 | 0.49 (0.08) <.01 | 0.49 (0.09) <.01 | 0.55 (0.09) <.01 | 0.52 (0.08) <.01 | --- | 0.47 (0.07) <.01 | 0.25 (0.08) <.01 | --- |
| er | Corr (Slopes) | 0.86 (0.15) <.01 | 0.76 (0.12) <.01 | 0.94 (0.26) <.01 | 0.64 (0.23) .01 | 0.82 (0.74) .27 | 0.70 (0.16) <.01 | 0.74 (0.14) <.01 | 0.86 (0.11) <.01 | 0.81 (0.09) <.01 | 0.96 (0.14) <.01 | --- | 0.89 (0.06) <.01 | 0.82 (0.37) .03 | --- |
| er | Corr (Residuals) | 0.15 (0.07) .03 | 0.20 (0.06) <.01 | -0.02 (0.06) .76 | -0.04 (0.06) .51 | -0.07 (0.07) .32 | 0.14 (0.07) .06 | 0.03 (0.08) .74 | 0.07 (0.06) .25 | 0.19 (0.07) <.01 | 0.09 (0.08) .25 | --- | 0.08 (0.06) .23 | 0.03 (0.06) .68 | --- |
| a | Level | 10.89 (0.54) <.01 | 10.93 (0.54) <.01 | 10.94 (0.53) <.01 | 10.93 (0.53) <.01 | 10.85 (0.54) <.01 | 10.90 (0.53) <.01 | 10.84 (0.53) <.01 | 10.92 (0.53) <.01 | 10.97 (0.53) <.01 | 10.87 (0.53) <.01 | --- | 10.86 (0.53) <.01 | 10.87 (0.54) <.01 | 10.90(0.04) |
| a | Slope | 12.66 (1.37) <.01 | 12.61 (0.70) <.01 | 3.28 (0.26) <.01 | 5.57 (0.26) <.01 | 16.04 (0.83) <.01 | 28.94 (2.33) <.01 | 5.17 (0.54) <.01 | 8.20 (0.49) <.01 | 25.41 (0.98) <.01 | 7.96 (0.88) <.01 | --- | 24.51 (2.37) <.01 | 17.30 (1.20) <.01 | 13.97(8.62) |
| a | Level \* age | -0.24 (0.07) <.01 | -0.24 (0.07) <.01 | -0.24 (0.07) <.01 | -0.23 (0.07) <.01 | -0.22 (0.07) <.01 | -0.24 (0.07) <.01 | -0.22 (0.07) <.01 | -0.24 (0.07) <.01 | -0.26 (0.07) <.01 | -0.23 (0.07) <.01 | --- | -0.23 (0.07) <.01 | -0.22 (0.07) <.01 | -0.23(0.01) |
| a | Level \* education | -0.10 (0.05) .04 | -0.10 (0.05) .04 | -0.10 (0.05) .04 | -0.10 (0.05) .05 | -0.09 (0.05) .06 | -0.10 (0.05) .05 | -0.09 (0.05) .08 | -0.10 (0.05) .05 | -0.11 (0.05) .03 | -0.10 (0.05) .05 | --- | -0.09 (0.05) .07 | -0.09 (0.05) .07 | -0.10(0.01) |
| a | Level \* height | 13.18 (3.24) <.01 | 12.53 (3.18) <.01 | 12.95 (3.22) <.01 | 12.86 (3.19) <.01 | 12.95 (3.26) <.01 | 12.73 (3.21) <.01 | 13.05 (3.24) <.01 | 12.86 (3.18) <.01 | 12.32 (3.15) <.01 | 13.11 (3.23) <.01 | --- | 12.98 (3.25) <.01 | 13.06 (3.25) <.01 | 12.88(0.25) |
| a | Level \* smoking | 1.30 (0.43) <.01 | 1.30 (0.43) <.01 | 1.28 (0.43) <.01 | 1.24 (0.43) <.01 | 1.29 (0.43) <.01 | 1.31 (0.43) <.01 | 1.31 (0.43) <.01 | 1.28 (0.43) <.01 | 1.28 (0.43) <.01 | 1.29 (0.43) <.01 | --- | 1.29 (0.43) <.01 | 1.28 (0.43) <.01 | 1.29(0.02) |
| a | Level \* cardio | -0.20 (0.39) .60 | -0.25 (0.39) .53 | -0.24 (0.39) .55 | -0.22 (0.39) .58 | -0.20 (0.40) .61 | -0.22 (0.39) .57 | -0.18 (0.39) .64 | -0.21 (0.39) .58 | -0.22 (0.39) .57 | -0.19 (0.39) .62 | --- | -0.17 (0.40) .67 | -0.20 (0.40) .61 | -0.21(0.02) |
| a | Level \* diabetes | -0.47 (0.62) .44 | -0.49 (0.61) .42 | -0.45 (0.61) .46 | -0.45 (0.61) .46 | -0.46 (0.61) .45 | -0.45 (0.61) .47 | -0.40 (0.62) .51 | -0.41 (0.61) .50 | -0.51 (0.61) .40 | -0.44 (0.61) .47 | --- | -0.42 (0.62) .50 | -0.44 (0.61) .47 | -0.45(0.03) |
| a | Slope \* age | -0.02 (0.02) .33 | -0.02 (0.02) .33 | -0.01 (0.02) .43 | -0.02 (0.02) .19 | -0.02 (0.02) .21 | -0.01 (0.02) .45 | -0.01 (0.02) .35 | -0.01 (0.02) .44 | -0.02 (0.02) .30 | -0.02 (0.02) .19 | --- | -0.01 (0.02) .41 | -0.02 (0.02) .33 | -0.02(0.00) |
| a | Slope \* education | 0.01 (0.01) .23 | 0.02 (0.01) .12 | 0.02 (0.01) .11 | 0.02 (0.01) .14 | 0.01 (0.01) .29 | 0.01 (0.01) .21 | 0.01 (0.01) .24 | 0.02 (0.01) .15 | 0.02 (0.01) .09 | 0.01 (0.01) .25 | --- | 0.01 (0.01) .27 | 0.01 (0.01) .25 | 0.02(0.00) |
| a | Slope \* height | -1.29 (0.73) .08 | -1.04 (0.72) .15 | -1.00 (0.74) .18 | -0.98 (0.75) .19 | -0.98 (0.74) .18 | -0.83 (0.74) .27 | -1.05 (0.71) .14 | -0.98 (0.74) .18 | -1.02 (0.73) .16 | -1.07 (0.73) .14 | --- | -1.03 (0.74) .16 | -1.09 (0.75) .14 | -1.03(0.11) |
| a | Slope \* smoking | -0.05 (0.08) .51 | -0.02 (0.08) .78 | -0.05 (0.08) .54 | -0.03 (0.09) .71 | -0.09 (0.08) .26 | -0.08 (0.08) .31 | -0.06 (0.08) .42 | -0.00 (0.08) .95 | 0.04 (0.08) .63 | -0.07 (0.08) .40 | --- | -0.08 (0.08) .34 | -0.08 (0.08) .34 | -0.05(0.04) |
| a | Slope \* cardio | -0.10 (0.08) .18 | -0.09 (0.08) .24 | -0.08 (0.08) .29 | -0.10 (0.08) .21 | -0.10 (0.08) .25 | -0.10 (0.08) .21 | -0.11 (0.08) .16 | -0.09 (0.08) .25 | -0.10 (0.08) .21 | -0.11 (0.08) .17 | --- | -0.12 (0.08) .16 | -0.11 (0.08) .17 | -0.10(0.01) |
| a | Slope \* diabetes | -0.22 (0.18) .21 | -0.21 (0.17) .23 | -0.24 (0.17) .15 | -0.20 (0.17) .23 | -0.20 (0.17) .25 | -0.22 (0.17) .19 | -0.20 (0.17) .25 | -0.24 (0.17) .15 | -0.24 (0.17) .14 | -0.24 (0.17) .16 | --- | -0.23 (0.18) .20 | -0.20 (0.17) .25 | -0.22(0.02) |
| b | Level | -0.44 (0.09) <.01 | -0.50 (0.09) <.01 | -0.47 (0.09) <.01 | -0.46 (0.10) <.01 | -0.40 (0.09) <.01 | -0.42 (0.09) <.01 | -0.45 (0.09) <.01 | -0.52 (0.10) <.01 | -0.58 (0.10) <.01 | -0.43 (0.09) <.01 | --- | -0.43 (0.09) <.01 | -0.41 (0.10) <.01 | --- |
| b | Slope | -0.57 (0.18) <.01 | -0.75 (0.19) <.01 | -0.12 (0.08) .16 | -0.20 (0.06) <.01 | -0.19 (0.28) .50 | -1.06 (0.43) .01 | -0.11 (0.11) .32 | -0.54 (0.14) <.01 | -1.55 (0.36) <.01 | -0.18 (0.19) .33 | --- | -1.12 (0.40) <.01 | -0.61 (0.23) .01 | --- |
| b | Level \* age | -0.36 (0.20) .07 | -0.10 (0.10) .31 | -0.07 (0.04) .11 | 0.02 (0.03) .58 | -0.18 (0.11) .10 | -0.65 (0.32) .04 | -0.15 (0.07) .04 | -0.12 (0.07) .07 | -0.10 (0.12) .39 | -0.17 (0.12) .15 | --- | -0.46 (0.37) .21 | 0.21 (0.21) .30 | --- |
| b | Level \* education | 0.75 (0.21) <.01 | 0.14 (0.05) .01 | 0.15 (0.03) <.01 | 0.09 (0.02) <.01 | 0.42 (0.10) <.01 | 1.49 (0.20) <.01 | 0.20 (0.05) <.01 | 0.18 (0.05) <.01 | 0.32 (0.08) <.01 | 0.54 (0.09) <.01 | --- | 2.11 (0.26) <.01 | 1.25 (0.13) <.01 | --- |
| b | Level \* height | 19.38 (8.44) .02 | 7.37 (3.79) .05 | 1.53 (1.22) .21 | 1.90 (1.23) .12 | 4.42 (5.54) .42 | 25.42 (11.81) .03 | 3.44 (2.90) .24 | 5.34 (2.45) .03 | 7.84 (4.66) .09 | 7.11 (4.78) .14 | --- | 27.32 (12.41) .03 | 8.67 (6.75) .20 | --- |
| b | Level \* smoking | -1.21 (1.16) .30 | 1.37 (0.59) .02 | 0.17 (0.24) .48 | -0.24 (0.20) .24 | -0.92 (0.72) .20 | 1.83 (1.90) .34 | 0.48 (0.46) .29 | 0.95 (0.42) .02 | 1.28 (0.77) .10 | 0.80 (0.70) .26 | --- | -2.54 (1.90) .18 | -3.15 (1.03) <.01 | --- |
| b | Level \* cardio | -0.21 (1.00) .84 | 0.56 (0.46) .23 | -0.19 (0.21) .35 | 0.07 (0.17) .66 | 0.59 (0.60) .32 | 2.14 (1.42) .13 | 0.40 (0.37) .29 | 0.61 (0.32) .06 | 0.79 (0.65) .22 | 0.35 (0.60) .56 | --- | 0.14 (1.64) .93 | -0.26 (0.91) .78 | --- |
| b | Level \* diabetes | -0.66 (1.56) .67 | -0.77 (0.73) .29 | 0.09 (0.29) .75 | 0.09 (0.21) .65 | 0.33 (1.08) .76 | -0.46 (2.06) .82 | 0.06 (0.58) .92 | 0.37 (0.47) .43 | -0.41 (0.97) .67 | 1.37 (0.84) .10 | --- | 0.88 (2.85) .76 | -1.85 (1.34) .17 | --- |
| b | Slope \* age | 0.02 (0.03) .37 | -0.01 (0.03) .83 | 0.01 (0.01) .59 | -0.02 (0.01) .04 | 0.04 (0.04) .27 | 0.08 (0.07) .26 | -0.01 (0.02) .50 | 0.01 (0.02) .59 | -0.09 (0.05) .10 | -0.02 (0.04) .62 | --- | 0.04 (0.06) .53 | 0.00 (0.04) .90 | --- |
| b | Slope \* education | 0.07 (0.04) .09 | 0.06 (0.02) <.01 | 0.00 (0.01) .72 | 0.01 (0.01) .02 | -0.01 (0.03) .85 | 0.10 (0.04) <.01 | 0.01 (0.02) .56 | 0.02 (0.02) .28 | 0.08 (0.03) .02 | 0.03 (0.02) .15 | --- | 0.07 (0.05) .17 | 0.02 (0.02) .31 | --- |
| b | Slope \* height | -2.20 (1.63) .18 | -0.99 (1.20) .41 | 0.35 (0.45) .44 | -0.35 (0.33) .29 | 1.75 (1.16) .13 | -1.05 (2.93) .72 | -0.27 (0.72) .71 | -0.12 (0.83) .89 | -0.94 (2.08) .65 | -0.43 (1.39) .76 | --- | -2.38 (2.37) .32 | 0.34 (1.12) .76 | --- |
| b | Slope \* smoking | -0.15 (0.15) .35 | 0.13 (0.17) .46 | -0.07 (0.06) .30 | 0.12 (0.06) .03 | -0.22 (0.17) .20 | -0.28 (0.34) .41 | -0.13 (0.10) .17 | 0.14 (0.12) .24 | 0.54 (0.31) .08 | -0.14 (0.14) .32 | --- | -0.02 (0.37) .96 | 0.27 (0.16) .10 | --- |
| b | Slope \* cardio | -0.12 (0.18) .53 | -0.04 (0.15) .76 | 0.04 (0.06) .54 | -0.04 (0.04) .34 | 0.15 (0.15) .32 | -0.26 (0.31) .41 | -0.11 (0.10) .26 | 0.04 (0.10) .70 | 0.00 (0.25) .99 | -0.25 (0.15) .10 | --- | -0.15 (0.31) .63 | 0.04 (0.14) .80 | --- |
| b | Slope \* diabetes | -0.09 (0.39) .83 | 0.05 (0.28) .86 | -0.07 (0.11) .52 | -0.01 (0.06) .81 | -0.05 (0.37) .89 | -0.69 (0.71) .33 | -0.08 (0.17) .65 | -0.21 (0.20) .28 | -0.44 (0.43) .30 | -0.30 (0.28) .28 | --- | -0.40 (0.72) .58 | -0.05 (0.28) .86 | --- |
| a | Var (Level) | 5.93 (0.74) <.01 | 5.93 (0.75) <.01 | 5.91 (0.73) <.01 | 5.80 (0.70) <.01 | 6.01 (0.75) <.01 | 5.88 (0.73) <.01 | 5.91 (0.73) <.01 | 5.79 (0.70) <.01 | 5.79 (0.72) <.01 | 5.93 (0.74) <.01 | --- | 6.00 (0.73) <.01 | 5.94 (0.74) <.01 | 5.90(0.07) |
| a | Var (Slope) | 0.09 (0.04) .02 | 0.11 (0.05) .02 | 0.10 (0.04) .03 | 0.10 (0.05) .03 | 0.09 (0.05) .07 | 0.10 (0.04) .03 | 0.10 (0.04) .02 | 0.11 (0.04) .01 | 0.13 (0.05) <.01 | 0.10 (0.04) .03 | --- | 0.11 (0.04) .01 | 0.10 (0.05) .05 | 0.10(0.01) |
| a | Var (Residual) | 1.93 (0.21) <.01 | 1.91 (0.20) <.01 | 1.92 (0.21) <.01 | 1.91 (0.20) <.01 | 1.91 (0.21) <.01 | 1.93 (0.21) <.01 | 1.90 (0.20) <.01 | 1.90 (0.20) <.01 | 1.92 (0.20) <.01 | 1.92 (0.20) <.01 | --- | 1.86 (0.18) <.01 | 1.92 (0.21) <.01 | 1.91(0.02) |
| b | Var (Level) | 41.17 (5.07) <.01 | 7.41 (1.74) <.01 | 0.82 (0.22) <.01 | 0.75 (0.19) <.01 | 8.28 (2.07) <.01 | 96.38 (11.37) <.01 | 5.72 (0.67) <.01 | 3.24 (0.76) <.01 | 12.12 (2.67) <.01 | 12.96 (1.66) <.01 | --- | 99.62 (13.15) <.01 | 23.65 (2.69) <.01 | --- |
| b | Var (Slope) | 0.38 (0.21) .07 | 0.50 (0.13) <.01 | 0.02 (0.01) .12 | 0.02 (0.01) .02 | 0.16 (0.14) .22 | 2.15 (0.61) <.01 | 0.14 (0.03) <.01 | 0.20 (0.06) <.01 | 1.86 (0.39) <.01 | 0.24 (0.15) .11 | --- | 1.87 (0.67) <.01 | 0.12 (0.11) .26 | --- |
| b | Var (Residual) | 10.07 (1.12) <.01 | 5.44 (0.75) <.01 | 1.38 (0.14) <.01 | 0.77 (0.11) <.01 | 8.55 (1.05) <.01 | 12.85 (1.37) <.01 | 2.02 (0.19) <.01 | 2.81 (0.53) <.01 | 9.29 (1.14) <.01 | 4.77 (0.65) <.01 | --- | 19.32 (2.40) <.01 | 6.15 (0.66) <.01 | --- |
| a | Covar (Level, Slope) | -0.01 (0.12) .95 | 0.04 (0.12) .78 | 0.01 (0.12) .92 | 0.04 (0.12) .72 | -0.04 (0.13) .76 | -0.01 (0.12) .96 | 0.03 (0.12) .82 | 0.10 (0.12) .39 | 0.20 (0.12) .11 | -0.01 (0.12) .93 | --- | -0.04 (0.12) .76 | -0.02 (0.13) .86 | 0.02(0.07) |
| b | Covar (Level, Slope) | -0.29 (0.75) .70 | 1.26 (0.22) <.01 | -0.00 (0.04) .96 | -0.00 (0.03) .95 | -0.18 (0.42) .66 | 0.92 (1.47) .53 | 0.04 (0.09) .66 | 0.72 (0.14) <.01 | 4.29 (0.72) <.01 | 0.25 (0.31) .42 | --- | -1.95 (2.06) .34 | -0.19 (0.36) .59 | --- |
|  | Correlation of Levels | 0.49 | 0.55 | 0.340 | 0.142 | 0.639 | 0.32 | 0.491 | 0.486 | 0.55 | 0.517 | NaN | 0.475 | 0.254 | 0.44(0.14) |
|  | Correlation of Slopes | 0.86 | 0.76 | 0.953 | 0.627 | 0.826 | 0.70 | 0.746 | 0.862 | 0.81 | 0.960 | NaN | 0.887 | 0.824 | 0.82(0.10) |
|  | Correlation of Residuals | 0.15 | 0.20 | -0.018 | -0.039 | -0.075 | 0.14 | 0.027 | 0.073 | 0.19 | 0.089 | NaN | 0.078 | 0.027 | 0.07(0.09) |
|  | N | 214 | 215 | 215 | 215 | 212 | 215 | 215 | 215 | 216 | 214 | NA | 212 | 212 | 214.17(1.40) |
|  | occasions | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | NA | 5 | 5 | 5.00(0.00) |
|  | parameters | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | NA | 41 | 41 | 41.00(0.00) |
|  | LL | -3,137 | -3,124 | -2,531 | -2,406 | -2,722 | -3,362 | -2,742 | -2,767 | -3,394 | -2,738 | NA | -3,103 | -2,645 | -2,889(323) |
|  | AIC | 6,356 | 6,330 | 5,143 | 4,894 | 5,527 | 6,806 | 5,565 | 5,615 | 6,870 | 5,559 | NA | 6,288 | 5,372 | 5,860(646) |
|  | BIC | 6,494 | 6,468 | 5,281 | 5,033 | 5,664 | 6,944 | 5,703 | 5,753 | 7,008 | 5,697 | NA | 6,425 | 5,510 | 5,998(647) |

## block

Gender = *male*; Process (a) = *grip*; Process (b) = *block*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| process | label | a | ae | aeh | aehplus |
| ab | Covar (Levels) | 12.06 (1.65) <.01 | 10.20 (1.55) <.01 | 7.30 (1.35) <.01 | 7.65 (1.37) <.01 |
| ab | Covar (Slopes) | 0.15 (0.08) .05 | 0.15 (0.08) .06 | 0.16 (0.08) .05 | 0.16 (0.07) .03 |
| ab | Covar (Residuals) | 0.60 (0.27) .03 | 0.64 (0.28) .02 | 0.67 (0.31) .03 | 0.67 (0.32) .04 |
| er | Corr (Levels) | 0.54 (0.05) <.01 | 0.51 (0.05) <.01 | 0.45 (0.06) <.01 | 0.49 (0.06) <.01 |
| er | Corr (Slopes) | 0.72 (0.17) <.01 | 0.72 (0.18) <.01 | 0.80 (0.17) <.01 | 0.86 (0.15) <.01 |
| er | Corr (Residuals) | 0.14 (0.06) .02 | 0.15 (0.06) .02 | 0.15 (0.07) .02 | 0.15 (0.07) .03 |
| a | Level | 10.82 (0.38) <.01 | 11.01 (0.36) <.01 | 11.64 (0.31) <.01 | 10.89 (0.54) <.01 |
| a | Slope | 10.76 (0.87) <.01 | 10.65 (0.84) <.01 | 11.61 (0.83) <.01 | 12.66 (1.37) <.01 |
| a | Level \* age | -0.32 (0.07) <.01 | -0.27 (0.07) <.01 | -0.24 (0.07) <.01 | -0.24 (0.07) <.01 |
| a | Level \* education | --- | -0.00 (0.06) .92 | -0.07 (0.05) .20 | -0.10 (0.05) .04 |
| a | Level \* height | --- | --- | 14.41 (3.51) <.01 | 13.18 (3.24) <.01 |
| a | Level \* smoking | --- | --- | --- | 1.30 (0.43) <.01 |
| a | Level \* cardio | --- | --- | --- | -0.20 (0.39) .60 |
| a | Level \* diabetes | --- | --- | --- | -0.47 (0.62) .44 |
| a | Slope \* age | -0.02 (0.01) .15 | -0.01 (0.01) .34 | -0.01 (0.02) .59 | -0.02 (0.02) .33 |
| a | Slope \* education | --- | 0.01 (0.01) .25 | 0.02 (0.01) .20 | 0.01 (0.01) .23 |
| a | Slope \* height | --- | --- | -1.04 (0.73) .16 | -1.29 (0.73) .08 |
| a | Slope \* smoking | --- | --- | --- | -0.05 (0.08) .51 |
| a | Slope \* cardio | --- | --- | --- | -0.10 (0.08) .18 |
| a | Slope \* diabetes | --- | --- | --- | -0.22 (0.18) .21 |
| b | Level | -0.55 (0.06) <.01 | -0.55 (0.06) <.01 | -0.57 (0.06) <.01 | -0.44 (0.09) <.01 |
| b | Slope | -0.66 (0.11) <.01 | -0.72 (0.12) <.01 | -0.78 (0.13) <.01 | -0.57 (0.18) <.01 |
| b | Level \* age | -0.62 (0.17) <.01 | -0.46 (0.19) .01 | -0.37 (0.20) .06 | -0.36 (0.20) .07 |
| b | Level \* education | --- | 0.69 (0.22) <.01 | 0.70 (0.21) <.01 | 0.75 (0.21) <.01 |
| b | Level \* height | --- | --- | 19.72 (8.15) .02 | 19.38 (8.44) .02 |
| b | Level \* smoking | --- | --- | --- | -1.21 (1.16) .30 |
| b | Level \* cardio | --- | --- | --- | -0.21 (1.00) .84 |
| b | Level \* diabetes | --- | --- | --- | -0.66 (1.56) .67 |
| b | Slope \* age | 0.01 (0.02) .58 | 0.03 (0.02) .20 | 0.04 (0.03) .15 | 0.02 (0.03) .37 |
| b | Slope \* education | --- | 0.06 (0.04) .09 | 0.07 (0.04) .10 | 0.07 (0.04) .09 |
| b | Slope \* height | --- | --- | -2.44 (1.65) .14 | -2.20 (1.63) .18 |
| b | Slope \* smoking | --- | --- | --- | -0.15 (0.15) .35 |
| b | Slope \* cardio | --- | --- | --- | -0.12 (0.18) .53 |
| b | Slope \* diabetes | --- | --- | --- | -0.09 (0.39) .83 |
| a | Var (Level) | 9.91 (1.17) <.01 | 8.56 (1.08) <.01 | 6.36 (0.81) <.01 | 5.93 (0.74) <.01 |
| a | Var (Slope) | 0.12 (0.04) .01 | 0.12 (0.05) .01 | 0.11 (0.05) .02 | 0.09 (0.04) .02 |
| a | Var (Residual) | 1.87 (0.18) <.01 | 1.83 (0.18) <.01 | 1.90 (0.20) <.01 | 1.93 (0.21) <.01 |
| b | Var (Level) | 50.31 (5.00) <.01 | 46.08 (4.73) <.01 | 41.98 (5.18) <.01 | 41.17 (5.07) <.01 |
| b | Var (Slope) | 0.40 (0.20) .05 | 0.39 (0.20) .06 | 0.39 (0.21) .06 | 0.38 (0.21) .07 |
| b | Var (Residual) | 9.23 (1.03) <.01 | 9.46 (1.05) <.01 | 9.97 (1.11) <.01 | 10.07 (1.12) <.01 |
| a | Covar (Level, Slope) | -0.01 (0.14) .94 | -0.08 (0.14) .55 | -0.01 (0.13) .92 | -0.01 (0.12) .95 |
| b | Covar (Level, Slope) | -0.32 (0.72) .65 | -0.53 (0.74) .47 | -0.18 (0.70) .80 | -0.29 (0.75) .70 |
|  | Correlation of Levels | 0.54 | 0.51 | 0.45 | 0.49 |
|  | Correlation of Slopes | 0.72 | 0.72 | 0.80 | 0.86 |
|  | Correlation of Residuals | 0.14 | 0.15 | 0.15 | 0.15 |
|  | N | 280 | 258 | 216 | 214 |
|  | occasions | 5 | 5 | 5 | 5 |
|  | parameters | 21 | 25 | 29 | 41 |
|  | LL | -3,759 | -3,571 | -3,171 | -3,137 |
|  | AIC | 7,560 | 7,193 | 6,401 | 6,356 |
|  | BIC | 7,636 | 7,281 | 6,498 | 6,494 |

## clock

Gender = *male*; Process (a) = *grip*; Process (b) = *clock*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| process | label | a | ae | aeh | aehplus |
| ab | Covar (Levels) | 12.58 (1.56) <.01 | 8.67 (1.39) <.01 | 4.58 (1.10) <.01 | 3.66 (0.93) <.01 |
| ab | Covar (Slopes) | 0.14 (0.06) .02 | 0.15 (0.06) .02 | 0.17 (0.07) .01 | 0.17 (0.07) .01 |
| ab | Covar (Residuals) | 0.64 (0.20) <.01 | 0.70 (0.21) <.01 | 0.67 (0.23) <.01 | 0.66 (0.23) <.01 |
| er | Corr (Levels) | 0.73 (0.04) <.01 | 0.67 (0.05) <.01 | 0.58 (0.08) <.01 | 0.55 (0.08) <.01 |
| er | Corr (Slopes) | 0.62 (0.16) <.01 | 0.70 (0.14) <.01 | 0.71 (0.13) <.01 | 0.76 (0.12) <.01 |
| er | Corr (Residuals) | 0.20 (0.05) <.01 | 0.21 (0.06) <.01 | 0.21 (0.06) <.01 | 0.20 (0.06) <.01 |
| a | Level | 10.74 (0.39) <.01 | 10.92 (0.38) <.01 | 11.61 (0.32) <.01 | 10.93 (0.54) <.01 |
| a | Slope | 12.54 (0.51) <.01 | 12.82 (0.45) <.01 | 13.57 (0.41) <.01 | 12.61 (0.70) <.01 |
| a | Level \* age | -0.41 (0.08) <.01 | -0.30 (0.08) <.01 | -0.25 (0.07) <.01 | -0.24 (0.07) <.01 |
| a | Level \* education | --- | -0.01 (0.06) .89 | -0.07 (0.05) .15 | -0.10 (0.05) .04 |
| a | Level \* height | --- | --- | 12.82 (3.46) <.01 | 12.53 (3.18) <.01 |
| a | Level \* smoking | --- | --- | --- | 1.30 (0.43) <.01 |
| a | Level \* cardio | --- | --- | --- | -0.25 (0.39) .53 |
| a | Level \* diabetes | --- | --- | --- | -0.49 (0.61) .42 |
| a | Slope \* age | -0.02 (0.01) .19 | -0.01 (0.01) .43 | -0.01 (0.02) .58 | -0.02 (0.02) .33 |
| a | Slope \* education | --- | 0.02 (0.01) .16 | 0.02 (0.01) .11 | 0.02 (0.01) .12 |
| a | Slope \* height | --- | --- | -0.87 (0.72) .22 | -1.04 (0.72) .15 |
| a | Slope \* smoking | --- | --- | --- | -0.02 (0.08) .78 |
| a | Slope \* cardio | --- | --- | --- | -0.09 (0.08) .24 |
| a | Slope \* diabetes | --- | --- | --- | -0.21 (0.17) .23 |
| b | Level | -0.57 (0.06) <.01 | -0.57 (0.06) <.01 | -0.60 (0.07) <.01 | -0.50 (0.09) <.01 |
| b | Slope | -0.52 (0.11) <.01 | -0.61 (0.12) <.01 | -0.67 (0.13) <.01 | -0.75 (0.19) <.01 |
| b | Level \* age | -0.55 (0.10) <.01 | -0.28 (0.10) .01 | -0.13 (0.10) .19 | -0.10 (0.10) .31 |
| b | Level \* education | --- | 0.19 (0.08) .01 | 0.14 (0.06) .03 | 0.14 (0.05) .01 |
| b | Level \* height | --- | --- | 6.73 (4.52) .14 | 7.37 (3.79) .05 |
| b | Level \* smoking | --- | --- | --- | 1.37 (0.59) .02 |
| b | Level \* cardio | --- | --- | --- | 0.56 (0.46) .23 |
| b | Level \* diabetes | --- | --- | --- | -0.77 (0.73) .29 |
| b | Slope \* age | 0.00 (0.02) .91 | 0.00 (0.03) .97 | -0.01 (0.03) .81 | -0.01 (0.03) .83 |
| b | Slope \* education | --- | 0.06 (0.02) <.01 | 0.06 (0.02) <.01 | 0.06 (0.02) <.01 |
| b | Slope \* height | --- | --- | -1.07 (1.16) .35 | -0.99 (1.20) .41 |
| b | Slope \* smoking | --- | --- | --- | 0.13 (0.17) .46 |
| b | Slope \* cardio | --- | --- | --- | -0.04 (0.15) .76 |
| b | Slope \* diabetes | --- | --- | --- | 0.05 (0.28) .86 |
| a | Var (Level) | 11.03 (1.31) <.01 | 9.33 (1.23) <.01 | 6.48 (0.86) <.01 | 5.93 (0.75) <.01 |
| a | Var (Slope) | 0.13 (0.05) <.01 | 0.13 (0.05) .01 | 0.12 (0.05) .02 | 0.11 (0.05) .02 |
| a | Var (Residual) | 1.83 (0.18) <.01 | 1.81 (0.18) <.01 | 1.89 (0.20) <.01 | 1.91 (0.20) <.01 |
| b | Var (Level) | 27.04 (2.48) <.01 | 17.75 (2.32) <.01 | 9.72 (2.06) <.01 | 7.41 (1.74) <.01 |
| b | Var (Slope) | 0.37 (0.11) <.01 | 0.38 (0.11) <.01 | 0.47 (0.12) <.01 | 0.50 (0.13) <.01 |
| b | Var (Residual) | 5.50 (0.74) <.01 | 5.91 (0.77) <.01 | 5.50 (0.76) <.01 | 5.44 (0.75) <.01 |
| a | Covar (Level, Slope) | 0.03 (0.16) .84 | -0.04 (0.15) .78 | 0.05 (0.13) .68 | 0.04 (0.12) .78 |
| b | Covar (Level, Slope) | 0.26 (0.27) .33 | 0.92 (0.27) <.01 | 1.33 (0.24) <.01 | 1.26 (0.22) <.01 |
|  | Correlation of Levels | 0.73 | 0.67 | 0.58 | 0.55 |
|  | Correlation of Slopes | 0.62 | 0.70 | 0.71 | 0.76 |
|  | Correlation of Residuals | 0.20 | 0.21 | 0.21 | 0.20 |
|  | N | 307 | 270 | 219 | 215 |
|  | occasions | 5 | 5 | 5 | 5 |
|  | parameters | 21 | 25 | 29 | 41 |
|  | LL | -4,065 | -3,730 | -3,179 | -3,124 |
|  | AIC | 8,172 | 7,510 | 6,417 | 6,330 |
|  | BIC | 8,251 | 7,600 | 6,515 | 6,468 |

## digit\_b

Gender = *male*; Process (a) = *grip*; Process (b) = *digit\_b*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| process | label | a | ae | aeh | aehplus |
| ab | Covar (Levels) | 2.21 (0.44) <.01 | 1.55 (0.39) <.01 | 0.77 (0.30) .01 | 0.75 (0.28) .01 |
| ab | Covar (Slopes) | 0.05 (0.02) .03 | 0.05 (0.02) .04 | 0.05 (0.02) .05 | 0.04 (0.02) .04 |
| ab | Covar (Residuals) | 0.01 (0.09) .94 | 0.01 (0.10) .93 | -0.02 (0.10) .86 | -0.03 (0.10) .76 |
| er | Corr (Levels) | 0.55 (0.08) <.01 | 0.50 (0.10) <.01 | 0.34 (0.13) .01 | 0.34 (0.12) .01 |
| er | Corr (Slopes) | 0.85 (0.20) <.01 | 0.88 (0.22) <.01 | 0.94 (0.26) <.01 | 0.94 (0.26) <.01 |
| er | Corr (Residuals) | 0.00 (0.06) .94 | 0.00 (0.06) .93 | -0.01 (0.06) .86 | -0.02 (0.06) .76 |
| a | Level | 10.84 (0.38) <.01 | 11.01 (0.36) <.01 | 11.67 (0.31) <.01 | 10.94 (0.53) <.01 |
| a | Slope | 3.11 (0.16) <.01 | 3.12 (0.15) <.01 | 3.32 (0.15) <.01 | 3.28 (0.26) <.01 |
| a | Level \* age | -0.33 (0.07) <.01 | -0.27 (0.07) <.01 | -0.25 (0.07) <.01 | -0.24 (0.07) <.01 |
| a | Level \* education | --- | -0.00 (0.06) .95 | -0.07 (0.05) .18 | -0.10 (0.05) .04 |
| a | Level \* height | --- | --- | 14.25 (3.50) <.01 | 12.95 (3.22) <.01 |
| a | Level \* smoking | --- | --- | --- | 1.28 (0.43) <.01 |
| a | Level \* cardio | --- | --- | --- | -0.24 (0.39) .55 |
| a | Level \* diabetes | --- | --- | --- | -0.45 (0.61) .46 |
| a | Slope \* age | -0.02 (0.01) .16 | -0.01 (0.01) .41 | -0.01 (0.02) .66 | -0.01 (0.02) .43 |
| a | Slope \* education | --- | 0.01 (0.01) .22 | 0.02 (0.01) .10 | 0.02 (0.01) .11 |
| a | Slope \* height | --- | --- | -0.82 (0.73) .27 | -1.00 (0.74) .18 |
| a | Slope \* smoking | --- | --- | --- | -0.05 (0.08) .54 |
| a | Slope \* cardio | --- | --- | --- | -0.08 (0.08) .29 |
| a | Slope \* diabetes | --- | --- | --- | -0.24 (0.17) .15 |
| b | Level | -0.57 (0.06) <.01 | -0.57 (0.07) <.01 | -0.59 (0.07) <.01 | -0.47 (0.09) <.01 |
| b | Slope | -0.14 (0.04) <.01 | -0.15 (0.04) <.01 | -0.16 (0.05) <.01 | -0.12 (0.08) .16 |
| b | Level \* age | -0.09 (0.03) .01 | -0.06 (0.03) .08 | -0.06 (0.04) .11 | -0.07 (0.04) .11 |
| b | Level \* education | --- | 0.16 (0.03) <.01 | 0.15 (0.03) <.01 | 0.15 (0.03) <.01 |
| b | Level \* height | --- | --- | 1.67 (1.19) .16 | 1.53 (1.22) .21 |
| b | Level \* smoking | --- | --- | --- | 0.17 (0.24) .48 |
| b | Level \* cardio | --- | --- | --- | -0.19 (0.21) .35 |
| b | Level \* diabetes | --- | --- | --- | 0.09 (0.29) .75 |
| b | Slope \* age | -0.00 (0.01) .74 | 0.00 (0.01) .92 | 0.01 (0.01) .59 | 0.01 (0.01) .59 |
| b | Slope \* education | --- | -0.00 (0.01) .87 | 0.00 (0.01) .90 | 0.00 (0.01) .72 |
| b | Slope \* height | --- | --- | 0.21 (0.41) .60 | 0.35 (0.45) .44 |
| b | Slope \* smoking | --- | --- | --- | -0.07 (0.06) .30 |
| b | Slope \* cardio | --- | --- | --- | 0.04 (0.06) .54 |
| b | Slope \* diabetes | --- | --- | --- | -0.07 (0.11) .52 |
| a | Var (Level) | 9.97 (1.19) <.01 | 8.60 (1.09) <.01 | 6.34 (0.81) <.01 | 5.91 (0.73) <.01 |
| a | Var (Slope) | 0.12 (0.05) .01 | 0.12 (0.05) .02 | 0.11 (0.05) .03 | 0.10 (0.04) .03 |
| a | Var (Residual) | 1.85 (0.18) <.01 | 1.82 (0.18) <.01 | 1.89 (0.20) <.01 | 1.92 (0.21) <.01 |
| b | Var (Level) | 1.62 (0.25) <.01 | 1.10 (0.22) <.01 | 0.80 (0.22) <.01 | 0.82 (0.22) <.01 |
| b | Var (Slope) | 0.03 (0.01) .06 | 0.02 (0.01) .09 | 0.02 (0.01) .13 | 0.02 (0.01) .12 |
| b | Var (Residual) | 1.36 (0.13) <.01 | 1.40 (0.13) <.01 | 1.41 (0.14) <.01 | 1.38 (0.14) <.01 |
| a | Covar (Level, Slope) | 0.06 (0.14) .69 | -0.04 (0.14) .77 | 0.01 (0.13) .96 | 0.01 (0.12) .92 |
| b | Covar (Level, Slope) | -0.03 (0.05) .59 | -0.02 (0.05) .72 | 0.00 (0.04) .98 | -0.00 (0.04) .96 |
|  | Correlation of Levels | 0.5498 | 0.503 | 0.342 | 0.340 |
|  | Correlation of Slopes | 0.8468 | 0.891 | 0.942 | 0.953 |
|  | Correlation of Residuals | 0.0044 | 0.005 | -0.011 | -0.018 |
|  | N | 286 | 263 | 217 | 215 |
|  | occasions | 5 | 5 | 5 | 5 |
|  | parameters | 21 | 25 | 29 | 41 |
|  | LL | -3,096 | -2,922 | -2,558 | -2,531 |
|  | AIC | 6,233 | 5,894 | 5,173 | 5,143 |
|  | BIC | 6,310 | 5,984 | 5,271 | 5,281 |

## digit\_f

Gender = *male*; Process (a) = *grip*; Process (b) = *digit\_f*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| process | label | a | ae | aeh | aehplus |
| ab | Covar (Levels) | 1.11 (0.38) <.01 | 0.48 (0.32) .13 | 0.21 (0.31) .49 | 0.30 (0.30) .33 |
| ab | Covar (Slopes) | 0.06 (0.02) <.01 | 0.04 (0.02) .01 | 0.03 (0.02) .05 | 0.03 (0.02) .07 |
| ab | Covar (Residuals) | -0.04 (0.08) .65 | -0.05 (0.07) .50 | -0.05 (0.07) .50 | -0.05 (0.07) .51 |
| er | Corr (Levels) | 0.35 (0.10) <.01 | 0.18 (0.11) .11 | 0.10 (0.14) .47 | 0.14 (0.14) .31 |
| er | Corr (Slopes) | 0.76 (0.16) <.01 | 0.63 (0.18) <.01 | 0.60 (0.22) .01 | 0.64 (0.23) .01 |
| er | Corr (Residuals) | -0.03 (0.06) .65 | -0.04 (0.06) .49 | -0.04 (0.06) .50 | -0.04 (0.06) .51 |
| a | Level | 10.81 (0.38) <.01 | 11.01 (0.36) <.01 | 11.64 (0.31) <.01 | 10.93 (0.53) <.01 |
| a | Slope | 5.40 (0.13) <.01 | 5.44 (0.12) <.01 | 5.44 (0.13) <.01 | 5.57 (0.26) <.01 |
| a | Level \* age | -0.30 (0.07) <.01 | -0.25 (0.07) <.01 | -0.23 (0.07) <.01 | -0.23 (0.07) <.01 |
| a | Level \* education | --- | -0.00 (0.06) .93 | -0.06 (0.05) .20 | -0.10 (0.05) .05 |
| a | Level \* height | --- | --- | 14.19 (3.46) <.01 | 12.86 (3.19) <.01 |
| a | Level \* smoking | --- | --- | --- | 1.24 (0.43) <.01 |
| a | Level \* cardio | --- | --- | --- | -0.22 (0.39) .58 |
| a | Level \* diabetes | --- | --- | --- | -0.45 (0.61) .46 |
| a | Slope \* age | -0.03 (0.01) .02 | -0.02 (0.01) .17 | -0.02 (0.02) .34 | -0.02 (0.02) .19 |
| a | Slope \* education | --- | 0.02 (0.01) .14 | 0.02 (0.01) .11 | 0.02 (0.01) .14 |
| a | Slope \* height | --- | --- | -0.81 (0.73) .26 | -0.98 (0.75) .19 |
| a | Slope \* smoking | --- | --- | --- | -0.03 (0.09) .71 |
| a | Slope \* cardio | --- | --- | --- | -0.10 (0.08) .21 |
| a | Slope \* diabetes | --- | --- | --- | -0.20 (0.17) .23 |
| b | Level | -0.56 (0.06) <.01 | -0.56 (0.07) <.01 | -0.56 (0.07) <.01 | -0.46 (0.10) <.01 |
| b | Slope | -0.14 (0.04) <.01 | -0.16 (0.03) <.01 | -0.14 (0.03) <.01 | -0.20 (0.06) <.01 |
| b | Level \* age | -0.04 (0.03) .14 | -0.02 (0.02) .50 | 0.02 (0.03) .51 | 0.02 (0.03) .58 |
| b | Level \* education | --- | 0.08 (0.02) <.01 | 0.08 (0.02) <.01 | 0.09 (0.02) <.01 |
| b | Level \* height | --- | --- | 1.66 (1.23) .18 | 1.90 (1.23) .12 |
| b | Level \* smoking | --- | --- | --- | -0.24 (0.20) .24 |
| b | Level \* cardio | --- | --- | --- | 0.07 (0.17) .66 |
| b | Level \* diabetes | --- | --- | --- | 0.09 (0.21) .65 |
| b | Slope \* age | -0.03 (0.01) <.01 | -0.02 (0.01) .11 | -0.02 (0.01) .04 | -0.02 (0.01) .04 |
| b | Slope \* education | --- | 0.02 (0.01) .01 | 0.02 (0.01) .01 | 0.01 (0.01) .02 |
| b | Slope \* height | --- | --- | -0.21 (0.32) .52 | -0.35 (0.33) .29 |
| b | Slope \* smoking | --- | --- | --- | 0.12 (0.06) .03 |
| b | Slope \* cardio | --- | --- | --- | -0.04 (0.04) .34 |
| b | Slope \* diabetes | --- | --- | --- | -0.01 (0.06) .81 |
| a | Var (Level) | 9.66 (1.14) <.01 | 8.32 (1.04) <.01 | 6.21 (0.78) <.01 | 5.80 (0.70) <.01 |
| a | Var (Slope) | 0.15 (0.05) <.01 | 0.13 (0.05) .01 | 0.12 (0.05) .02 | 0.10 (0.05) .03 |
| a | Var (Residual) | 1.84 (0.17) <.01 | 1.82 (0.18) <.01 | 1.89 (0.20) <.01 | 1.91 (0.20) <.01 |
| b | Var (Level) | 1.04 (0.22) <.01 | 0.82 (0.17) <.01 | 0.76 (0.18) <.01 | 0.75 (0.19) <.01 |
| b | Var (Slope) | 0.04 (0.02) .01 | 0.03 (0.01) <.01 | 0.03 (0.01) .01 | 0.02 (0.01) .02 |
| b | Var (Residual) | 1.00 (0.17) <.01 | 0.80 (0.11) <.01 | 0.78 (0.11) <.01 | 0.77 (0.11) <.01 |
| a | Covar (Level, Slope) | 0.15 (0.14) .30 | 0.02 (0.14) .88 | 0.05 (0.13) .70 | 0.04 (0.12) .72 |
| b | Covar (Level, Slope) | 0.04 (0.04) .34 | -0.02 (0.03) .63 | -0.01 (0.03) .71 | -0.00 (0.03) .95 |
|  | Correlation of Levels | 0.349 | 0.184 | 0.099 | 0.142 |
|  | Correlation of Slopes | 0.759 | 0.621 | 0.600 | 0.627 |
|  | Correlation of Residuals | -0.026 | -0.038 | -0.040 | -0.039 |
|  | N | 288 | 264 | 217 | 215 |
|  | occasions | 5 | 5 | 5 | 5 |
|  | parameters | 21 | 25 | 29 | 41 |
|  | LL | -3,039 | -2,794 | -2,433 | -2,406 |
|  | AIC | 6,120 | 5,637 | 4,924 | 4,894 |
|  | BIC | 6,196 | 5,726 | 5,022 | 5,033 |

## fig\_logic

Gender = *male*; Process (a) = *grip*; Process (b) = *fig\_logic*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| process | label | a | ae | aeh | aehplus |
| ab | Covar (Levels) | 7.63 (1.51) <.01 | 6.98 (1.37) <.01 | 4.40 (1.03) <.01 | 4.51 (0.96) <.01 |
| ab | Covar (Slopes) | 0.10 (0.07) .16 | 0.10 (0.07) .15 | 0.11 (0.08) .19 | 0.10 (0.09) .23 |
| ab | Covar (Residuals) | -0.38 (0.29) .20 | -0.37 (0.29) .20 | -0.34 (0.30) .27 | -0.30 (0.31) .32 |
| er | Corr (Levels) | 0.66 (0.09) <.01 | 0.68 (0.09) <.01 | 0.59 (0.11) <.01 | 0.64 (0.11) <.01 |
| er | Corr (Slopes) | 0.73 (0.50) .14 | 0.74 (0.49) .13 | 0.78 (0.63) .22 | 0.82 (0.74) .27 |
| er | Corr (Residuals) | -0.09 (0.07) .19 | -0.09 (0.07) .20 | -0.08 (0.07) .27 | -0.07 (0.07) .32 |
| a | Level | 10.76 (0.38) <.01 | 10.95 (0.36) <.01 | 11.60 (0.31) <.01 | 10.85 (0.54) <.01 |
| a | Slope | 14.98 (0.59) <.01 | 14.87 (0.57) <.01 | 15.71 (0.50) <.01 | 16.04 (0.83) <.01 |
| a | Level \* age | -0.29 (0.08) <.01 | -0.24 (0.07) <.01 | -0.22 (0.07) <.01 | -0.22 (0.07) <.01 |
| a | Level \* education | --- | -0.00 (0.06) .96 | -0.06 (0.05) .25 | -0.09 (0.05) .06 |
| a | Level \* height | --- | --- | 14.29 (3.53) <.01 | 12.95 (3.26) <.01 |
| a | Level \* smoking | --- | --- | --- | 1.29 (0.43) <.01 |
| a | Level \* cardio | --- | --- | --- | -0.20 (0.40) .61 |
| a | Level \* diabetes | --- | --- | --- | -0.46 (0.61) .45 |
| a | Slope \* age | -0.02 (0.01) .09 | -0.02 (0.01) .23 | -0.01 (0.02) .41 | -0.02 (0.02) .21 |
| a | Slope \* education | --- | 0.01 (0.01) .29 | 0.01 (0.01) .26 | 0.01 (0.01) .29 |
| a | Slope \* height | --- | --- | -0.86 (0.73) .24 | -0.98 (0.74) .18 |
| a | Slope \* smoking | --- | --- | --- | -0.09 (0.08) .26 |
| a | Slope \* cardio | --- | --- | --- | -0.10 (0.08) .25 |
| a | Slope \* diabetes | --- | --- | --- | -0.20 (0.17) .25 |
| b | Level | -0.54 (0.06) <.01 | -0.53 (0.06) <.01 | -0.55 (0.07) <.01 | -0.40 (0.09) <.01 |
| b | Slope | -0.28 (0.17) .10 | -0.27 (0.16) .11 | -0.29 (0.17) .09 | -0.19 (0.28) .50 |
| b | Level \* age | -0.21 (0.12) .08 | -0.14 (0.12) .26 | -0.19 (0.11) .10 | -0.18 (0.11) .10 |
| b | Level \* education | --- | 0.37 (0.11) <.01 | 0.40 (0.10) <.01 | 0.42 (0.10) <.01 |
| b | Level \* height | --- | --- | 4.84 (5.37) .37 | 4.42 (5.54) .42 |
| b | Level \* smoking | --- | --- | --- | -0.92 (0.72) .20 |
| b | Level \* cardio | --- | --- | --- | 0.59 (0.60) .32 |
| b | Level \* diabetes | --- | --- | --- | 0.33 (1.08) .76 |
| b | Slope \* age | 0.02 (0.03) .43 | 0.03 (0.03) .42 | 0.04 (0.04) .35 | 0.04 (0.04) .27 |
| b | Slope \* education | --- | -0.01 (0.03) .64 | -0.02 (0.03) .54 | -0.01 (0.03) .85 |
| b | Slope \* height | --- | --- | 1.13 (1.08) .29 | 1.75 (1.16) .13 |
| b | Slope \* smoking | --- | --- | --- | -0.22 (0.17) .20 |
| b | Slope \* cardio | --- | --- | --- | 0.15 (0.15) .32 |
| b | Slope \* diabetes | --- | --- | --- | -0.05 (0.37) .89 |
| a | Var (Level) | 10.03 (1.18) <.01 | 8.65 (1.09) <.01 | 6.43 (0.82) <.01 | 6.01 (0.75) <.01 |
| a | Var (Slope) | 0.11 (0.05) .02 | 0.11 (0.05) .03 | 0.11 (0.06) .06 | 0.09 (0.05) .07 |
| a | Var (Residual) | 1.88 (0.19) <.01 | 1.85 (0.19) <.01 | 1.90 (0.20) <.01 | 1.91 (0.21) <.01 |
| b | Var (Level) | 13.18 (2.48) <.01 | 12.06 (2.29) <.01 | 8.60 (1.92) <.01 | 8.28 (2.07) <.01 |
| b | Var (Slope) | 0.16 (0.11) .14 | 0.17 (0.11) .13 | 0.18 (0.14) .20 | 0.16 (0.14) .22 |
| b | Var (Residual) | 8.47 (1.00) <.01 | 8.45 (0.98) <.01 | 8.51 (1.02) <.01 | 8.55 (1.05) <.01 |
| a | Covar (Level, Slope) | -0.02 (0.14) .88 | -0.10 (0.14) .49 | -0.04 (0.13) .74 | -0.04 (0.13) .76 |
| b | Covar (Level, Slope) | -0.18 (0.48) .70 | -0.22 (0.44) .63 | -0.08 (0.40) .84 | -0.18 (0.42) .66 |
|  | Correlation of Levels | 0.664 | 0.683 | 0.592 | 0.639 |
|  | Correlation of Slopes | 0.728 | 0.741 | 0.785 | 0.826 |
|  | Correlation of Residuals | -0.094 | -0.093 | -0.083 | -0.075 |
|  | N | 271 | 252 | 214 | 212 |
|  | occasions | 5 | 5 | 5 | 5 |
|  | parameters | 21 | 25 | 29 | 41 |
|  | LL | -3,138 | -3,031 | -2,750 | -2,722 |
|  | AIC | 6,317 | 6,113 | 5,558 | 5,527 |
|  | BIC | 6,393 | 6,201 | 5,656 | 5,664 |

## information

Gender = *male*; Process (a) = *grip*; Process (b) = *information*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| process | label | a | ae | aeh | aehplus |
| ab | Covar (Levels) | 15.33 (3.47) <.01 | 11.71 (2.85) <.01 | 7.88 (2.51) <.01 | 7.65 (2.31) <.01 |
| ab | Covar (Slopes) | 0.37 (0.16) .02 | 0.36 (0.16) .03 | 0.35 (0.17) .04 | 0.32 (0.15) .04 |
| ab | Covar (Residuals) | 0.65 (0.37) .08 | 0.62 (0.36) .09 | 0.67 (0.37) .07 | 0.70 (0.38) .07 |
| er | Corr (Levels) | 0.41 (0.08) <.01 | 0.38 (0.08) <.01 | 0.31 (0.09) <.01 | 0.32 (0.09) <.01 |
| er | Corr (Slopes) | 0.71 (0.14) <.01 | 0.69 (0.15) <.01 | 0.71 (0.15) <.01 | 0.70 (0.16) <.01 |
| er | Corr (Residuals) | 0.13 (0.07) .08 | 0.12 (0.07) .08 | 0.14 (0.07) .06 | 0.14 (0.07) .06 |
| a | Level | 10.88 (0.38) <.01 | 11.06 (0.36) <.01 | 11.65 (0.31) <.01 | 10.90 (0.53) <.01 |
| a | Slope | 30.79 (1.38) <.01 | 30.45 (1.25) <.01 | 31.20 (1.34) <.01 | 28.94 (2.33) <.01 |
| a | Level \* age | -0.33 (0.07) <.01 | -0.28 (0.07) <.01 | -0.25 (0.07) <.01 | -0.24 (0.07) <.01 |
| a | Level \* education | --- | 0.00 (0.06) .97 | -0.06 (0.05) .20 | -0.10 (0.05) .05 |
| a | Level \* height | --- | --- | 13.78 (3.46) <.01 | 12.73 (3.21) <.01 |
| a | Level \* smoking | --- | --- | --- | 1.31 (0.43) <.01 |
| a | Level \* cardio | --- | --- | --- | -0.22 (0.39) .57 |
| a | Level \* diabetes | --- | --- | --- | -0.45 (0.61) .47 |
| a | Slope \* age | -0.02 (0.01) .22 | -0.01 (0.01) .46 | -0.00 (0.02) .78 | -0.01 (0.02) .45 |
| a | Slope \* education | --- | 0.01 (0.01) .30 | 0.02 (0.01) .19 | 0.01 (0.01) .21 |
| a | Slope \* height | --- | --- | -0.70 (0.74) .35 | -0.83 (0.74) .27 |
| a | Slope \* smoking | --- | --- | --- | -0.08 (0.08) .31 |
| a | Slope \* cardio | --- | --- | --- | -0.10 (0.08) .21 |
| a | Slope \* diabetes | --- | --- | --- | -0.22 (0.17) .19 |
| b | Level | -0.56 (0.06) <.01 | -0.56 (0.06) <.01 | -0.57 (0.07) <.01 | -0.42 (0.09) <.01 |
| b | Slope | -1.54 (0.28) <.01 | -1.60 (0.29) <.01 | -1.49 (0.30) <.01 | -1.06 (0.43) .01 |
| b | Level \* age | -1.22 (0.34) <.01 | -0.99 (0.32) <.01 | -0.75 (0.32) .02 | -0.65 (0.32) .04 |
| b | Level \* education | --- | 1.69 (0.21) <.01 | 1.42 (0.21) <.01 | 1.49 (0.20) <.01 |
| b | Level \* height | --- | --- | 23.21 (12.06) .05 | 25.42 (11.81) .03 |
| b | Level \* smoking | --- | --- | --- | 1.83 (1.90) .34 |
| b | Level \* cardio | --- | --- | --- | 2.14 (1.42) .13 |
| b | Level \* diabetes | --- | --- | --- | -0.46 (2.06) .82 |
| b | Slope \* age | 0.06 (0.06) .29 | 0.10 (0.06) .10 | 0.10 (0.07) .18 | 0.08 (0.07) .26 |
| b | Slope \* education | --- | 0.08 (0.04) .02 | 0.11 (0.04) <.01 | 0.10 (0.04) <.01 |
| b | Slope \* height | --- | --- | -0.89 (2.97) .76 | -1.05 (2.93) .72 |
| b | Slope \* smoking | --- | --- | --- | -0.28 (0.34) .41 |
| b | Slope \* cardio | --- | --- | --- | -0.26 (0.31) .41 |
| b | Slope \* diabetes | --- | --- | --- | -0.69 (0.71) .33 |
| a | Var (Level) | 9.80 (1.16) <.01 | 8.47 (1.07) <.01 | 6.32 (0.81) <.01 | 5.88 (0.73) <.01 |
| a | Var (Slope) | 0.12 (0.05) .01 | 0.12 (0.05) .01 | 0.11 (0.05) .02 | 0.10 (0.04) .03 |
| a | Var (Residual) | 1.90 (0.18) <.01 | 1.86 (0.18) <.01 | 1.91 (0.20) <.01 | 1.93 (0.21) <.01 |
| b | Var (Level) | 143.06 (13.28) <.01 | 111.31 (11.08) <.01 | 99.59 (11.48) <.01 | 96.38 (11.37) <.01 |
| b | Var (Slope) | 2.42 (0.67) <.01 | 2.35 (0.66) <.01 | 2.21 (0.65) <.01 | 2.15 (0.61) <.01 |
| b | Var (Residual) | 13.36 (1.45) <.01 | 13.43 (1.48) <.01 | 12.92 (1.38) <.01 | 12.85 (1.37) <.01 |
| a | Covar (Level, Slope) | 0.04 (0.15) .76 | -0.04 (0.14) .77 | -0.01 (0.13) .93 | -0.01 (0.12) .96 |
| b | Covar (Level, Slope) | 3.75 (1.74) .03 | 1.99 (1.71) .24 | 0.89 (1.56) .57 | 0.92 (1.47) .53 |
|  | Correlation of Levels | 0.41 | 0.38 | 0.31 | 0.32 |
|  | Correlation of Slopes | 0.71 | 0.69 | 0.72 | 0.70 |
|  | Correlation of Residuals | 0.13 | 0.12 | 0.14 | 0.14 |
|  | N | 281 | 262 | 218 | 215 |
|  | occasions | 5 | 5 | 5 | 5 |
|  | parameters | 21 | 25 | 29 | 41 |
|  | LL | -3,986 | -3,835 | -3,392 | -3,362 |
|  | AIC | 8,014 | 7,721 | 6,843 | 6,806 |
|  | BIC | 8,090 | 7,810 | 6,941 | 6,944 |

## mir

Gender = *male*; Process (a) = *grip*; Process (b) = *mir*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| process | label | a | ae | aeh | aehplus |
| ab | Covar (Levels) | 5.24 (0.83) <.01 | 4.12 (0.76) <.01 | 3.03 (0.64) <.01 | 2.85 (0.58) <.01 |
| ab | Covar (Slopes) | 0.07 (0.03) .01 | 0.08 (0.03) .01 | 0.10 (0.03) <.01 | 0.09 (0.03) <.01 |
| ab | Covar (Residuals) | 0.06 (0.14) .66 | 0.07 (0.14) .63 | 0.05 (0.15) .74 | 0.05 (0.16) .74 |
| er | Corr (Levels) | 0.60 (0.06) <.01 | 0.55 (0.07) <.01 | 0.50 (0.08) <.01 | 0.49 (0.08) <.01 |
| er | Corr (Slopes) | 0.58 (0.15) <.01 | 0.63 (0.14) <.01 | 0.75 (0.13) <.01 | 0.74 (0.14) <.01 |
| er | Corr (Residuals) | 0.03 (0.07) .65 | 0.04 (0.07) .62 | 0.03 (0.08) .73 | 0.03 (0.08) .74 |
| a | Level | 10.83 (0.38) <.01 | 10.99 (0.36) <.01 | 11.62 (0.31) <.01 | 10.84 (0.53) <.01 |
| a | Slope | 5.42 (0.33) <.01 | 5.41 (0.33) <.01 | 5.70 (0.32) <.01 | 5.17 (0.54) <.01 |
| a | Level \* age | -0.31 (0.08) <.01 | -0.25 (0.07) <.01 | -0.23 (0.07) <.01 | -0.22 (0.07) <.01 |
| a | Level \* education | --- | 0.01 (0.06) .81 | -0.05 (0.05) .30 | -0.09 (0.05) .08 |
| a | Level \* height | --- | --- | 14.33 (3.50) <.01 | 13.05 (3.24) <.01 |
| a | Level \* smoking | --- | --- | --- | 1.31 (0.43) <.01 |
| a | Level \* cardio | --- | --- | --- | -0.18 (0.39) .64 |
| a | Level \* diabetes | --- | --- | --- | -0.40 (0.62) .51 |
| a | Slope \* age | -0.02 (0.01) .19 | -0.01 (0.01) .46 | -0.01 (0.01) .65 | -0.01 (0.02) .35 |
| a | Slope \* education | --- | 0.01 (0.01) .24 | 0.01 (0.01) .21 | 0.01 (0.01) .24 |
| a | Slope \* height | --- | --- | -0.87 (0.71) .22 | -1.05 (0.71) .14 |
| a | Slope \* smoking | --- | --- | --- | -0.06 (0.08) .42 |
| a | Slope \* cardio | --- | --- | --- | -0.11 (0.08) .16 |
| a | Slope \* diabetes | --- | --- | --- | -0.20 (0.17) .25 |
| b | Level | -0.58 (0.06) <.01 | -0.58 (0.06) <.01 | -0.59 (0.07) <.01 | -0.45 (0.09) <.01 |
| b | Slope | -0.28 (0.06) <.01 | -0.29 (0.06) <.01 | -0.28 (0.07) <.01 | -0.11 (0.11) .32 |
| b | Level \* age | -0.30 (0.07) <.01 | -0.22 (0.07) <.01 | -0.17 (0.08) .03 | -0.15 (0.07) .04 |
| b | Level \* education | --- | 0.24 (0.06) <.01 | 0.20 (0.05) <.01 | 0.20 (0.05) <.01 |
| b | Level \* height | --- | --- | 4.04 (2.86) .16 | 3.44 (2.90) .24 |
| b | Level \* smoking | --- | --- | --- | 0.48 (0.46) .29 |
| b | Level \* cardio | --- | --- | --- | 0.40 (0.37) .29 |
| b | Level \* diabetes | --- | --- | --- | 0.06 (0.58) .92 |
| b | Slope \* age | 0.01 (0.01) .57 | 0.01 (0.01) .60 | -0.00 (0.02) .76 | -0.01 (0.02) .50 |
| b | Slope \* education | --- | 0.01 (0.02) .74 | 0.01 (0.02) .61 | 0.01 (0.02) .56 |
| b | Slope \* height | --- | --- | -0.30 (0.70) .67 | -0.27 (0.72) .71 |
| b | Slope \* smoking | --- | --- | --- | -0.13 (0.10) .17 |
| b | Slope \* cardio | --- | --- | --- | -0.11 (0.10) .26 |
| b | Slope \* diabetes | --- | --- | --- | -0.08 (0.17) .65 |
| a | Var (Level) | 9.92 (1.17) <.01 | 8.51 (1.07) <.01 | 6.34 (0.80) <.01 | 5.91 (0.73) <.01 |
| a | Var (Slope) | 0.12 (0.04) .01 | 0.12 (0.05) .01 | 0.11 (0.05) .02 | 0.10 (0.04) .02 |
| a | Var (Residual) | 1.85 (0.18) <.01 | 1.82 (0.18) <.01 | 1.88 (0.20) <.01 | 1.90 (0.20) <.01 |
| b | Var (Level) | 7.70 (0.70) <.01 | 6.70 (0.67) <.01 | 5.87 (0.67) <.01 | 5.72 (0.67) <.01 |
| b | Var (Slope) | 0.14 (0.03) <.01 | 0.14 (0.03) <.01 | 0.15 (0.04) <.01 | 0.14 (0.03) <.01 |
| b | Var (Residual) | 1.95 (0.18) <.01 | 2.02 (0.19) <.01 | 2.03 (0.19) <.01 | 2.02 (0.19) <.01 |
| a | Covar (Level, Slope) | 0.08 (0.14) .58 | -0.00 (0.14) .98 | 0.03 (0.13) .80 | 0.03 (0.12) .82 |
| b | Covar (Level, Slope) | -0.04 (0.11) .70 | -0.00 (0.10) .98 | 0.04 (0.10) .69 | 0.04 (0.09) .66 |
|  | Correlation of Levels | 0.600 | 0.546 | 0.496 | 0.491 |
|  | Correlation of Slopes | 0.588 | 0.632 | 0.753 | 0.746 |
|  | Correlation of Residuals | 0.032 | 0.036 | 0.027 | 0.027 |
|  | N | 282 | 258 | 217 | 215 |
|  | occasions | 5 | 5 | 5 | 5 |
|  | parameters | 21 | 25 | 29 | 41 |
|  | LL | -3,293 | -3,119 | -2,767 | -2,742 |
|  | AIC | 6,629 | 6,288 | 5,593 | 5,565 |
|  | BIC | 6,705 | 6,377 | 5,691 | 5,703 |

## mir\_recog

Gender = *male*; Process (a) = *grip*; Process (b) = *mir\_recog*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| process | label | a | ae | aeh | aehplus |
| ab | Covar (Levels) | 6.03 (1.06) <.01 | 4.21 (0.88) <.01 | 2.43 (0.65) <.01 | 2.10 (0.55) <.01 |
| ab | Covar (Slopes) | 0.12 (0.04) <.01 | 0.13 (0.04) <.01 | 0.14 (0.04) <.01 | 0.13 (0.04) <.01 |
| ab | Covar (Residuals) | 0.13 (0.15) .36 | 0.15 (0.15) .29 | 0.16 (0.15) .27 | 0.17 (0.15) .26 |
| er | Corr (Levels) | 0.64 (0.06) <.01 | 0.58 (0.07) <.01 | 0.51 (0.09) <.01 | 0.49 (0.09) <.01 |
| er | Corr (Slopes) | 0.82 (0.12) <.01 | 0.81 (0.11) <.01 | 0.83 (0.10) <.01 | 0.86 (0.11) <.01 |
| er | Corr (Residuals) | 0.06 (0.06) .35 | 0.07 (0.06) .28 | 0.07 (0.06) .25 | 0.07 (0.06) .25 |
| a | Level | 10.84 (0.38) <.01 | 11.01 (0.36) <.01 | 11.66 (0.31) <.01 | 10.92 (0.53) <.01 |
| a | Slope | 8.82 (0.34) <.01 | 8.83 (0.31) <.01 | 9.21 (0.26) <.01 | 8.20 (0.49) <.01 |
| a | Level \* age | -0.33 (0.07) <.01 | -0.26 (0.07) <.01 | -0.25 (0.07) <.01 | -0.24 (0.07) <.01 |
| a | Level \* education | --- | 0.00 (0.06) .99 | -0.06 (0.05) .21 | -0.10 (0.05) .05 |
| a | Level \* height | --- | --- | 14.11 (3.44) <.01 | 12.86 (3.18) <.01 |
| a | Level \* smoking | --- | --- | --- | 1.28 (0.43) <.01 |
| a | Level \* cardio | --- | --- | --- | -0.21 (0.39) .58 |
| a | Level \* diabetes | --- | --- | --- | -0.41 (0.61) .50 |
| a | Slope \* age | -0.02 (0.01) .15 | -0.01 (0.01) .49 | -0.00 (0.02) .74 | -0.01 (0.02) .44 |
| a | Slope \* education | --- | 0.02 (0.01) .15 | 0.02 (0.01) .12 | 0.02 (0.01) .15 |
| a | Slope \* height | --- | --- | -0.71 (0.74) .34 | -0.98 (0.74) .18 |
| a | Slope \* smoking | --- | --- | --- | -0.00 (0.08) .95 |
| a | Slope \* cardio | --- | --- | --- | -0.09 (0.08) .25 |
| a | Slope \* diabetes | --- | --- | --- | -0.24 (0.17) .15 |
| b | Level | -0.59 (0.06) <.01 | -0.60 (0.06) <.01 | -0.60 (0.07) <.01 | -0.52 (0.10) <.01 |
| b | Slope | -0.47 (0.08) <.01 | -0.50 (0.09) <.01 | -0.46 (0.09) <.01 | -0.54 (0.14) <.01 |
| b | Level \* age | -0.36 (0.08) <.01 | -0.22 (0.08) .01 | -0.15 (0.07) .04 | -0.12 (0.07) .07 |
| b | Level \* education | --- | 0.23 (0.05) <.01 | 0.19 (0.05) <.01 | 0.18 (0.05) <.01 |
| b | Level \* height | --- | --- | 6.15 (2.52) .01 | 5.34 (2.45) .03 |
| b | Level \* smoking | --- | --- | --- | 0.95 (0.42) .02 |
| b | Level \* cardio | --- | --- | --- | 0.61 (0.32) .06 |
| b | Level \* diabetes | --- | --- | --- | 0.37 (0.47) .43 |
| b | Slope \* age | 0.01 (0.02) .71 | 0.02 (0.02) .38 | 0.01 (0.02) .62 | 0.01 (0.02) .59 |
| b | Slope \* education | --- | 0.02 (0.02) .20 | 0.02 (0.02) .22 | 0.02 (0.02) .28 |
| b | Slope \* height | --- | --- | 0.14 (0.80) .86 | -0.12 (0.83) .89 |
| b | Slope \* smoking | --- | --- | --- | 0.14 (0.12) .24 |
| b | Slope \* cardio | --- | --- | --- | 0.04 (0.10) .70 |
| b | Slope \* diabetes | --- | --- | --- | -0.21 (0.20) .28 |
| a | Var (Level) | 9.81 (1.16) <.01 | 8.41 (1.06) <.01 | 6.19 (0.78) <.01 | 5.79 (0.70) <.01 |
| a | Var (Slope) | 0.13 (0.05) <.01 | 0.12 (0.05) .01 | 0.12 (0.05) .01 | 0.11 (0.04) .01 |
| a | Var (Residual) | 1.86 (0.18) <.01 | 1.83 (0.18) <.01 | 1.87 (0.19) <.01 | 1.90 (0.20) <.01 |
| b | Var (Level) | 8.92 (1.27) <.01 | 6.25 (1.10) <.01 | 3.72 (0.86) <.01 | 3.24 (0.76) <.01 |
| b | Var (Slope) | 0.17 (0.05) <.01 | 0.20 (0.06) <.01 | 0.21 (0.06) <.01 | 0.20 (0.06) <.01 |
| b | Var (Residual) | 2.97 (0.51) <.01 | 2.95 (0.52) <.01 | 2.82 (0.54) <.01 | 2.81 (0.53) <.01 |
| a | Covar (Level, Slope) | 0.19 (0.14) .19 | 0.09 (0.14) .52 | 0.12 (0.13) .37 | 0.10 (0.12) .39 |
| b | Covar (Level, Slope) | 0.88 (0.18) <.01 | 0.89 (0.16) <.01 | 0.78 (0.15) <.01 | 0.72 (0.14) <.01 |
|  | Correlation of Levels | 0.644 | 0.581 | 0.506 | 0.486 |
|  | Correlation of Slopes | 0.824 | 0.807 | 0.831 | 0.862 |
|  | Correlation of Residuals | 0.057 | 0.066 | 0.071 | 0.073 |
|  | N | 282 | 258 | 217 | 215 |
|  | occasions | 5 | 5 | 5 | 5 |
|  | parameters | 21 | 25 | 29 | 41 |
|  | LL | -3,396 | -3,193 | -2,802 | -2,767 |
|  | AIC | 6,834 | 6,437 | 5,662 | 5,615 |
|  | BIC | 6,910 | 6,526 | 5,760 | 5,753 |

## mmse

Gender = *male*; Process (a) = *grip*; Process (b) = *mmse*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| process | label | a | ae | aeh | aehplus |
| ab | Covar (Levels) | 20.62 (2.87) <.01 | 11.06 (2.08) <.01 | 5.69 (1.45) <.01 | 4.61 (1.15) <.01 |
| ab | Covar (Slopes) | 0.31 (0.11) <.01 | 0.37 (0.11) <.01 | 0.43 (0.13) <.01 | 0.40 (0.12) <.01 |
| ab | Covar (Residuals) | 0.74 (0.28) .01 | 0.75 (0.29) .01 | 0.76 (0.29) .01 | 0.79 (0.30) .01 |
| er | Corr (Levels) | 0.73 (0.05) <.01 | 0.64 (0.06) <.01 | 0.58 (0.09) <.01 | 0.55 (0.09) <.01 |
| er | Corr (Slopes) | 0.74 (0.11) <.01 | 0.78 (0.09) <.01 | 0.81 (0.08) <.01 | 0.81 (0.09) <.01 |
| er | Corr (Residuals) | 0.17 (0.06) .01 | 0.17 (0.06) .01 | 0.18 (0.07) .01 | 0.19 (0.07) <.01 |
| a | Level | 10.73 (0.39) <.01 | 10.95 (0.38) <.01 | 11.64 (0.32) <.01 | 10.97 (0.53) <.01 |
| a | Slope | 24.60 (0.85) <.01 | 25.22 (0.64) <.01 | 26.42 (0.55) <.01 | 25.41 (0.98) <.01 |
| a | Level \* age | -0.40 (0.08) <.01 | -0.29 (0.07) <.01 | -0.27 (0.07) <.01 | -0.26 (0.07) <.01 |
| a | Level \* education | --- | 0.00 (0.06) .97 | -0.08 (0.05) .14 | -0.11 (0.05) .03 |
| a | Level \* height | --- | --- | 12.77 (3.40) <.01 | 12.32 (3.15) <.01 |
| a | Level \* smoking | --- | --- | --- | 1.28 (0.43) <.01 |
| a | Level \* cardio | --- | --- | --- | -0.22 (0.39) .57 |
| a | Level \* diabetes | --- | --- | --- | -0.51 (0.61) .40 |
| a | Slope \* age | -0.03 (0.01) .05 | -0.02 (0.01) .27 | -0.01 (0.02) .52 | -0.02 (0.02) .30 |
| a | Slope \* education | --- | 0.02 (0.01) .06 | 0.02 (0.01) .08 | 0.02 (0.01) .09 |
| a | Slope \* height | --- | --- | -0.85 (0.72) .24 | -1.02 (0.73) .16 |
| a | Slope \* smoking | --- | --- | --- | 0.04 (0.08) .63 |
| a | Slope \* cardio | --- | --- | --- | -0.10 (0.08) .21 |
| a | Slope \* diabetes | --- | --- | --- | -0.24 (0.17) .14 |
| b | Level | -0.60 (0.06) <.01 | -0.62 (0.07) <.01 | -0.64 (0.07) <.01 | -0.58 (0.10) <.01 |
| b | Slope | -0.90 (0.17) <.01 | -1.11 (0.18) <.01 | -1.23 (0.20) <.01 | -1.55 (0.36) <.01 |
| b | Level \* age | -0.75 (0.19) <.01 | -0.27 (0.14) .06 | -0.13 (0.12) .29 | -0.10 (0.12) .39 |
| b | Level \* education | --- | 0.44 (0.09) <.01 | 0.32 (0.09) <.01 | 0.32 (0.08) <.01 |
| b | Level \* height | --- | --- | 6.64 (5.21) .20 | 7.84 (4.66) .09 |
| b | Level \* smoking | --- | --- | --- | 1.28 (0.77) .10 |
| b | Level \* cardio | --- | --- | --- | 0.79 (0.65) .22 |
| b | Level \* diabetes | --- | --- | --- | -0.41 (0.97) .67 |
| b | Slope \* age | -0.11 (0.04) .01 | -0.10 (0.05) .05 | -0.09 (0.05) .07 | -0.09 (0.05) .10 |
| b | Slope \* education | --- | 0.10 (0.03) <.01 | 0.08 (0.04) .02 | 0.08 (0.03) .02 |
| b | Slope \* height | --- | --- | -0.73 (2.00) .71 | -0.94 (2.08) .65 |
| b | Slope \* smoking | --- | --- | --- | 0.54 (0.31) .08 |
| b | Slope \* cardio | --- | --- | --- | 0.00 (0.25) .99 |
| b | Slope \* diabetes | --- | --- | --- | -0.44 (0.43) .30 |
| a | Var (Level) | 11.21 (1.34) <.01 | 8.97 (1.19) <.01 | 6.37 (0.84) <.01 | 5.79 (0.72) <.01 |
| a | Var (Slope) | 0.15 (0.05) <.01 | 0.15 (0.05) <.01 | 0.15 (0.05) <.01 | 0.13 (0.05) <.01 |
| a | Var (Residual) | 1.84 (0.18) <.01 | 1.82 (0.18) <.01 | 1.90 (0.20) <.01 | 1.92 (0.20) <.01 |
| b | Var (Level) | 72.06 (8.00) <.01 | 33.62 (5.53) <.01 | 15.01 (3.23) <.01 | 12.12 (2.67) <.01 |
| b | Var (Slope) | 1.21 (0.29) <.01 | 1.48 (0.33) <.01 | 1.94 (0.40) <.01 | 1.86 (0.39) <.01 |
| b | Var (Residual) | 10.30 (1.37) <.01 | 10.27 (1.35) <.01 | 9.41 (1.18) <.01 | 9.29 (1.14) <.01 |
| a | Covar (Level, Slope) | 0.22 (0.17) .18 | 0.15 (0.15) .31 | 0.23 (0.14) .10 | 0.20 (0.12) .11 |
| b | Covar (Level, Slope) | 2.15 (0.89) .02 | 3.77 (0.85) <.01 | 4.76 (0.81) <.01 | 4.29 (0.72) <.01 |
|  | Correlation of Levels | 0.73 | 0.64 | 0.58 | 0.55 |
|  | Correlation of Slopes | 0.74 | 0.78 | 0.81 | 0.81 |
|  | Correlation of Residuals | 0.17 | 0.17 | 0.18 | 0.19 |
|  | N | 308 | 271 | 220 | 216 |
|  | occasions | 5 | 5 | 5 | 5 |
|  | parameters | 21 | 25 | 29 | 41 |
|  | LL | -4,494 | -4,078 | -3,451 | -3,394 |
|  | AIC | 9,030 | 8,207 | 6,960 | 6,870 |
|  | BIC | 9,108 | 8,297 | 7,058 | 7,008 |

## prose\_im

Gender = *male*; Process (a) = *grip*; Process (b) = *prose\_im*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| process | label | a | ae | aeh | aehplus |
| ab | Covar (Levels) | 8.29 (1.21) <.01 | 6.68 (1.08) <.01 | 4.75 (0.96) <.01 | 4.53 (0.89) <.01 |
| ab | Covar (Slopes) | 0.15 (0.07) .05 | 0.15 (0.07) .05 | 0.16 (0.08) .05 | 0.14 (0.07) .04 |
| ab | Covar (Residuals) | 0.21 (0.22) .35 | 0.21 (0.23) .35 | 0.30 (0.25) .22 | 0.27 (0.24) .27 |
| er | Corr (Levels) | 0.61 (0.06) <.01 | 0.59 (0.06) <.01 | 0.51 (0.08) <.01 | 0.52 (0.08) <.01 |
| er | Corr (Slopes) | 0.92 (0.13) <.01 | 0.92 (0.13) <.01 | 0.93 (0.13) <.01 | 0.96 (0.14) <.01 |
| er | Corr (Residuals) | 0.07 (0.07) .34 | 0.07 (0.07) .34 | 0.10 (0.08) .20 | 0.09 (0.08) .25 |
| a | Level | 10.85 (0.38) <.01 | 11.02 (0.36) <.01 | 11.63 (0.31) <.01 | 10.87 (0.53) <.01 |
| a | Slope | 8.51 (0.53) <.01 | 8.40 (0.50) <.01 | 8.81 (0.53) <.01 | 7.96 (0.88) <.01 |
| a | Level \* age | -0.32 (0.07) <.01 | -0.27 (0.07) <.01 | -0.23 (0.07) <.01 | -0.23 (0.07) <.01 |
| a | Level \* education | --- | 0.01 (0.06) .86 | -0.06 (0.05) .24 | -0.10 (0.05) .05 |
| a | Level \* height | --- | --- | 14.45 (3.51) <.01 | 13.11 (3.23) <.01 |
| a | Level \* smoking | --- | --- | --- | 1.29 (0.43) <.01 |
| a | Level \* cardio | --- | --- | --- | -0.19 (0.39) .62 |
| a | Level \* diabetes | --- | --- | --- | -0.44 (0.61) .47 |
| a | Slope \* age | -0.02 (0.01) .09 | -0.01 (0.01) .27 | -0.01 (0.01) .42 | -0.02 (0.02) .19 |
| a | Slope \* education | --- | 0.01 (0.01) .33 | 0.01 (0.01) .22 | 0.01 (0.01) .25 |
| a | Slope \* height | --- | --- | -0.91 (0.75) .22 | -1.07 (0.73) .14 |
| a | Slope \* smoking | --- | --- | --- | -0.07 (0.08) .40 |
| a | Slope \* cardio | --- | --- | --- | -0.11 (0.08) .17 |
| a | Slope \* diabetes | --- | --- | --- | -0.24 (0.17) .16 |
| b | Level | -0.56 (0.06) <.01 | -0.56 (0.06) <.01 | -0.57 (0.07) <.01 | -0.43 (0.09) <.01 |
| b | Slope | -0.45 (0.10) <.01 | -0.48 (0.11) <.01 | -0.46 (0.13) <.01 | -0.18 (0.19) .33 |
| b | Level \* age | -0.42 (0.10) <.01 | -0.31 (0.10) <.01 | -0.19 (0.12) .11 | -0.17 (0.12) .15 |
| b | Level \* education | --- | 0.57 (0.10) <.01 | 0.54 (0.09) <.01 | 0.54 (0.09) <.01 |
| b | Level \* height | --- | --- | 7.56 (4.93) .12 | 7.11 (4.78) .14 |
| b | Level \* smoking | --- | --- | --- | 0.80 (0.70) .26 |
| b | Level \* cardio | --- | --- | --- | 0.35 (0.60) .56 |
| b | Level \* diabetes | --- | --- | --- | 1.37 (0.84) .10 |
| b | Slope \* age | -0.00 (0.02) .92 | 0.01 (0.02) .74 | -0.00 (0.04) .89 | -0.02 (0.04) .62 |
| b | Slope \* education | --- | 0.02 (0.02) .32 | 0.03 (0.02) .15 | 0.03 (0.02) .15 |
| b | Slope \* height | --- | --- | -0.35 (1.41) .80 | -0.43 (1.39) .76 |
| b | Slope \* smoking | --- | --- | --- | -0.14 (0.14) .32 |
| b | Slope \* cardio | --- | --- | --- | -0.25 (0.15) .10 |
| b | Slope \* diabetes | --- | --- | --- | -0.30 (0.28) .28 |
| a | Var (Level) | 9.94 (1.17) <.01 | 8.54 (1.07) <.01 | 6.36 (0.81) <.01 | 5.93 (0.74) <.01 |
| a | Var (Slope) | 0.12 (0.05) .01 | 0.12 (0.05) .02 | 0.11 (0.05) .03 | 0.10 (0.04) .03 |
| a | Var (Residual) | 1.87 (0.18) <.01 | 1.84 (0.18) <.01 | 1.90 (0.20) <.01 | 1.92 (0.20) <.01 |
| b | Var (Level) | 18.68 (1.68) <.01 | 14.83 (1.54) <.01 | 13.41 (1.64) <.01 | 12.96 (1.66) <.01 |
| b | Var (Slope) | 0.22 (0.14) .10 | 0.22 (0.14) .11 | 0.27 (0.16) .10 | 0.24 (0.15) .11 |
| b | Var (Residual) | 4.86 (0.58) <.01 | 5.01 (0.60) <.01 | 4.82 (0.65) <.01 | 4.77 (0.65) <.01 |
| a | Covar (Level, Slope) | 0.01 (0.15) .95 | -0.06 (0.14) .67 | -0.02 (0.13) .90 | -0.01 (0.12) .93 |
| b | Covar (Level, Slope) | 0.35 (0.32) .27 | 0.30 (0.34) .37 | 0.26 (0.35) .46 | 0.25 (0.31) .42 |
|  | Correlation of Levels | 0.608 | 0.59 | 0.51 | 0.517 |
|  | Correlation of Slopes | 0.919 | 0.92 | 0.94 | 0.960 |
|  | Correlation of Residuals | 0.069 | 0.07 | 0.10 | 0.089 |
|  | N | 284 | 262 | 216 | 214 |
|  | occasions | 5 | 5 | 5 | 5 |
|  | parameters | 21 | 25 | 29 | 41 |
|  | LL | -3,328 | -3,157 | -2,770 | -2,738 |
|  | AIC | 6,699 | 6,363 | 5,598 | 5,559 |
|  | BIC | 6,775 | 6,453 | 5,696 | 5,697 |

## psif

Gender = *male*; Process (a) = *grip*; Process (b) = *psif*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| process | label | a | ae | aeh | aehplus |
| ab | Covar (Levels) | --- | --- | --- | --- |
| ab | Covar (Slopes) | --- | --- | --- | --- |
| ab | Covar (Residuals) | --- | --- | --- | --- |
| er | Corr (Levels) | --- | --- | --- | --- |
| er | Corr (Slopes) | --- | --- | --- | --- |
| er | Corr (Residuals) | --- | --- | --- | --- |
| a | Level | --- | --- | --- | --- |
| a | Slope | --- | --- | --- | --- |
| a | Level \* age | --- | --- | --- | --- |
| a | Level \* education | --- | --- | --- | --- |
| a | Level \* height | --- | --- | --- | --- |
| a | Level \* smoking | --- | --- | --- | --- |
| a | Level \* cardio | --- | --- | --- | --- |
| a | Level \* diabetes | --- | --- | --- | --- |
| a | Slope \* age | --- | --- | --- | --- |
| a | Slope \* education | --- | --- | --- | --- |
| a | Slope \* height | --- | --- | --- | --- |
| a | Slope \* smoking | --- | --- | --- | --- |
| a | Slope \* cardio | --- | --- | --- | --- |
| a | Slope \* diabetes | --- | --- | --- | --- |
| b | Level | --- | --- | --- | --- |
| b | Slope | --- | --- | --- | --- |
| b | Level \* age | --- | --- | --- | --- |
| b | Level \* education | --- | --- | --- | --- |
| b | Level \* height | --- | --- | --- | --- |
| b | Level \* smoking | --- | --- | --- | --- |
| b | Level \* cardio | --- | --- | --- | --- |
| b | Level \* diabetes | --- | --- | --- | --- |
| b | Slope \* age | --- | --- | --- | --- |
| b | Slope \* education | --- | --- | --- | --- |
| b | Slope \* height | --- | --- | --- | --- |
| b | Slope \* smoking | --- | --- | --- | --- |
| b | Slope \* cardio | --- | --- | --- | --- |
| b | Slope \* diabetes | --- | --- | --- | --- |
| a | Var (Level) | --- | --- | --- | --- |
| a | Var (Slope) | --- | --- | --- | --- |
| a | Var (Residual) | --- | --- | --- | --- |
| b | Var (Level) | --- | --- | --- | --- |
| b | Var (Slope) | --- | --- | --- | --- |
| b | Var (Residual) | --- | --- | --- | --- |
| a | Covar (Level, Slope) | --- | --- | --- | --- |
| b | Covar (Level, Slope) | --- | --- | --- | --- |
|  | Correlation of Levels | NaN | NaN | NaN | NaN |
|  | Correlation of Slopes | NaN | NaN | NaN | NaN |
|  | Correlation of Residuals | NaN | NaN | NaN | NaN |
|  | N | NA | NA | NA | NA |
|  | occasions | NA | NA | NA | NA |
|  | parameters | NA | NA | NA | NA |
|  | LL | NA | NA | NA | NA |
|  | AIC | NA | NA | NA | NA |
|  | BIC | NA | NA | NA | NA |

## symbol

Gender = *male*; Process (a) = *grip*; Process (b) = *symbol*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| process | label | a | ae | aeh | aehplus |
| ab | Covar (Levels) | 19.07 (3.33) <.01 | 15.23 (2.79) <.01 | 11.07 (2.38) <.01 | 11.62 (2.36) <.01 |
| ab | Covar (Slopes) | 0.40 (0.17) .02 | 0.40 (0.17) .02 | 0.42 (0.18) .02 | 0.41 (0.15) .01 |
| ab | Covar (Residuals) | 0.26 (0.40) .51 | 0.26 (0.40) .50 | 0.46 (0.40) .24 | 0.47 (0.40) .24 |
| er | Corr (Levels) | 0.51 (0.06) <.01 | 0.50 (0.06) <.01 | 0.43 (0.07) <.01 | 0.47 (0.07) <.01 |
| er | Corr (Slopes) | 0.84 (0.10) <.01 | 0.83 (0.10) <.01 | 0.85 (0.09) <.01 | 0.89 (0.06) <.01 |
| er | Corr (Residuals) | 0.04 (0.07) .51 | 0.04 (0.07) .50 | 0.08 (0.07) .24 | 0.08 (0.06) .23 |
| a | Level | 10.82 (0.38) <.01 | 11.02 (0.36) <.01 | 11.63 (0.31) <.01 | 10.86 (0.53) <.01 |
| a | Slope | 22.28 (1.54) <.01 | 21.70 (1.37) <.01 | 22.87 (1.39) <.01 | 24.51 (2.37) <.01 |
| a | Level \* age | -0.31 (0.08) <.01 | -0.26 (0.07) <.01 | -0.24 (0.07) <.01 | -0.23 (0.07) <.01 |
| a | Level \* education | --- | 0.00 (0.06) .99 | -0.06 (0.05) .26 | -0.09 (0.05) .07 |
| a | Level \* height | --- | --- | 14.23 (3.52) <.01 | 12.98 (3.25) <.01 |
| a | Level \* smoking | --- | --- | --- | 1.29 (0.43) <.01 |
| a | Level \* cardio | --- | --- | --- | -0.17 (0.40) .67 |
| a | Level \* diabetes | --- | --- | --- | -0.42 (0.62) .50 |
| a | Slope \* age | -0.02 (0.01) .17 | -0.01 (0.01) .40 | -0.00 (0.02) .74 | -0.01 (0.02) .41 |
| a | Slope \* education | --- | 0.01 (0.01) .28 | 0.01 (0.01) .23 | 0.01 (0.01) .27 |
| a | Slope \* height | --- | --- | -0.83 (0.75) .27 | -1.03 (0.74) .16 |
| a | Slope \* smoking | --- | --- | --- | -0.08 (0.08) .34 |
| a | Slope \* cardio | --- | --- | --- | -0.12 (0.08) .16 |
| a | Slope \* diabetes | --- | --- | --- | -0.23 (0.18) .20 |
| b | Level | -0.56 (0.06) <.01 | -0.56 (0.06) <.01 | -0.58 (0.07) <.01 | -0.43 (0.09) <.01 |
| b | Slope | -1.15 (0.24) <.01 | -1.19 (0.25) <.01 | -1.28 (0.26) <.01 | -1.12 (0.40) <.01 |
| b | Level \* age | -0.95 (0.36) .01 | -0.50 (0.36) .16 | -0.45 (0.37) .22 | -0.46 (0.37) .21 |
| b | Level \* education | --- | 1.99 (0.26) <.01 | 2.04 (0.26) <.01 | 2.11 (0.26) <.01 |
| b | Level \* height | --- | --- | 28.49 (12.08) .02 | 27.32 (12.41) .03 |
| b | Level \* smoking | --- | --- | --- | -2.54 (1.90) .18 |
| b | Level \* cardio | --- | --- | --- | 0.14 (1.64) .93 |
| b | Level \* diabetes | --- | --- | --- | 0.88 (2.85) .76 |
| b | Slope \* age | -0.01 (0.05) .79 | 0.00 (0.06) .93 | 0.05 (0.06) .44 | 0.04 (0.06) .53 |
| b | Slope \* education | --- | 0.05 (0.05) .28 | 0.07 (0.05) .15 | 0.07 (0.05) .17 |
| b | Slope \* height | --- | --- | -2.34 (2.29) .31 | -2.38 (2.37) .32 |
| b | Slope \* smoking | --- | --- | --- | -0.02 (0.37) .96 |
| b | Slope \* cardio | --- | --- | --- | -0.15 (0.31) .63 |
| b | Slope \* diabetes | --- | --- | --- | -0.40 (0.72) .58 |
| a | Var (Level) | 9.92 (1.17) <.01 | 8.57 (1.08) <.01 | 6.40 (0.80) <.01 | 6.00 (0.73) <.01 |
| a | Var (Slope) | 0.13 (0.05) .01 | 0.13 (0.05) .01 | 0.13 (0.05) .01 | 0.11 (0.04) .01 |
| a | Var (Residual) | 1.83 (0.17) <.01 | 1.79 (0.17) <.01 | 1.84 (0.18) <.01 | 1.86 (0.18) <.01 |
| b | Var (Level) | 142.68 (15.55) <.01 | 108.69 (13.55) <.01 | 101.35 (13.64) <.01 | 99.62 (13.15) <.01 |
| b | Var (Slope) | 1.74 (0.70) .01 | 1.75 (0.68) .01 | 1.84 (0.73) .01 | 1.87 (0.67) <.01 |
| b | Var (Residual) | 19.71 (2.37) <.01 | 19.75 (2.37) <.01 | 19.38 (2.42) <.01 | 19.32 (2.40) <.01 |
| a | Covar (Level, Slope) | 0.00 (0.15) .99 | -0.08 (0.14) .55 | -0.04 (0.13) .76 | -0.04 (0.12) .76 |
| b | Covar (Level, Slope) | -1.11 (1.98) .57 | -1.82 (1.94) .35 | -1.79 (1.95) .36 | -1.95 (2.06) .34 |
|  | Correlation of Levels | 0.507 | 0.499 | 0.435 | 0.475 |
|  | Correlation of Slopes | 0.836 | 0.830 | 0.855 | 0.887 |
|  | Correlation of Residuals | 0.044 | 0.044 | 0.078 | 0.078 |
|  | N | 272 | 252 | 214 | 212 |
|  | occasions | 5 | 5 | 5 | 5 |
|  | parameters | 21 | 25 | 29 | 41 |
|  | LL | -3,596 | -3,440 | -3,130 | -3,103 |
|  | AIC | 7,234 | 6,930 | 6,317 | 6,288 |
|  | BIC | 7,309 | 7,018 | 6,415 | 6,425 |

## synonyms

Gender = *male*; Process (a) = *grip*; Process (b) = *synonyms*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| process | label | a | ae | aeh | aehplus |
| ab | Covar (Levels) | 3.73 (1.79) .04 | 3.95 (1.36) <.01 | 2.77 (1.07) .01 | 3.01 (1.04) <.01 |
| ab | Covar (Slopes) | 0.07 (0.05) .18 | 0.07 (0.05) .17 | 0.10 (0.05) .06 | 0.09 (0.07) .18 |
| ab | Covar (Residuals) | 0.09 (0.23) .70 | 0.12 (0.22) .59 | 0.02 (0.22) .92 | 0.09 (0.22) .68 |
| er | Corr (Levels) | 0.19 (0.09) .03 | 0.25 (0.08) <.01 | 0.21 (0.08) .01 | 0.25 (0.08) <.01 |
| er | Corr (Slopes) | 0.71 (0.34) .04 | 0.68 (0.32) .03 | 0.94 (0.28) <.01 | 0.82 (0.37) .03 |
| er | Corr (Residuals) | 0.02 (0.07) .70 | 0.03 (0.06) .58 | 0.01 (0.06) .92 | 0.03 (0.06) .68 |
| a | Level | 10.81 (0.38) <.01 | 11.00 (0.36) <.01 | 11.62 (0.31) <.01 | 10.87 (0.54) <.01 |
| a | Slope | 14.98 (0.89) <.01 | 14.30 (0.78) <.01 | 14.71 (0.80) <.01 | 17.30 (1.20) <.01 |
| a | Level \* age | -0.30 (0.08) <.01 | -0.25 (0.07) <.01 | -0.23 (0.07) <.01 | -0.22 (0.07) <.01 |
| a | Level \* education | --- | 0.00 (0.06) .99 | -0.06 (0.05) .26 | -0.09 (0.05) .07 |
| a | Level \* height | --- | --- | 14.37 (3.51) <.01 | 13.06 (3.25) <.01 |
| a | Level \* smoking | --- | --- | --- | 1.28 (0.43) <.01 |
| a | Level \* cardio | --- | --- | --- | -0.20 (0.40) .61 |
| a | Level \* diabetes | --- | --- | --- | -0.44 (0.61) .47 |
| a | Slope \* age | -0.02 (0.01) .14 | -0.01 (0.01) .35 | -0.01 (0.02) .62 | -0.02 (0.02) .33 |
| a | Slope \* education | --- | 0.01 (0.01) .28 | 0.01 (0.01) .22 | 0.01 (0.01) .25 |
| a | Slope \* height | --- | --- | -0.96 (0.74) .20 | -1.09 (0.75) .14 |
| a | Slope \* smoking | --- | --- | --- | -0.08 (0.08) .34 |
| a | Slope \* cardio | --- | --- | --- | -0.11 (0.08) .17 |
| a | Slope \* diabetes | --- | --- | --- | -0.20 (0.17) .25 |
| b | Level | -0.54 (0.06) <.01 | -0.54 (0.07) <.01 | -0.56 (0.07) <.01 | -0.41 (0.10) <.01 |
| b | Slope | -0.35 (0.13) .01 | -0.38 (0.13) <.01 | -0.38 (0.14) .01 | -0.61 (0.23) .01 |
| b | Level \* age | 0.12 (0.22) .61 | 0.25 (0.21) .23 | 0.25 (0.21) .23 | 0.21 (0.21) .30 |
| b | Level \* education | --- | 1.21 (0.13) <.01 | 1.18 (0.12) <.01 | 1.25 (0.13) <.01 |
| b | Level \* height | --- | --- | 8.46 (6.61) .20 | 8.67 (6.75) .20 |
| b | Level \* smoking | --- | --- | --- | -3.15 (1.03) <.01 |
| b | Level \* cardio | --- | --- | --- | -0.26 (0.91) .78 |
| b | Level \* diabetes | --- | --- | --- | -1.85 (1.34) .17 |
| b | Slope \* age | -0.02 (0.04) .55 | -0.01 (0.04) .88 | -0.00 (0.04) .91 | 0.00 (0.04) .90 |
| b | Slope \* education | --- | 0.02 (0.02) .26 | 0.03 (0.02) .13 | 0.02 (0.02) .31 |
| b | Slope \* height | --- | --- | 0.41 (1.11) .71 | 0.34 (1.12) .76 |
| b | Slope \* smoking | --- | --- | --- | 0.27 (0.16) .10 |
| b | Slope \* cardio | --- | --- | --- | 0.04 (0.14) .80 |
| b | Slope \* diabetes | --- | --- | --- | -0.05 (0.28) .86 |
| a | Var (Level) | 9.93 (1.18) <.01 | 8.55 (1.08) <.01 | 6.35 (0.81) <.01 | 5.94 (0.74) <.01 |
| a | Var (Slope) | 0.12 (0.05) .02 | 0.11 (0.05) .03 | 0.11 (0.05) .05 | 0.10 (0.05) .05 |
| a | Var (Residual) | 1.88 (0.19) <.01 | 1.85 (0.19) <.01 | 1.90 (0.21) <.01 | 1.92 (0.21) <.01 |
| b | Var (Level) | 39.09 (3.85) <.01 | 28.21 (3.08) <.01 | 26.33 (3.09) <.01 | 23.65 (2.69) <.01 |
| b | Var (Slope) | 0.08 (0.07) .21 | 0.10 (0.07) .17 | 0.10 (0.08) .21 | 0.12 (0.11) .26 |
| b | Var (Residual) | 6.66 (0.81) <.01 | 6.64 (0.78) <.01 | 6.33 (0.70) <.01 | 6.15 (0.66) <.01 |
| a | Covar (Level, Slope) | -0.01 (0.15) .97 | -0.08 (0.15) .58 | -0.02 (0.13) .88 | -0.02 (0.13) .86 |
| b | Covar (Level, Slope) | -0.13 (0.41) .75 | -0.41 (0.34) .23 | -0.33 (0.34) .34 | -0.19 (0.36) .59 |
|  | Correlation of Levels | 0.189 | 0.255 | 0.2140 | 0.254 |
|  | Correlation of Slopes | 0.708 | 0.682 | 0.9432 | 0.824 |
|  | Correlation of Residuals | 0.025 | 0.034 | 0.0063 | 0.027 |
|  | N | 271 | 252 | 214 | 212 |
|  | occasions | 5 | 5 | 5 | 5 |
|  | parameters | 21 | 25 | 29 | 41 |
|  | LL | -3,091 | -2,957 | -2,673 | -2,645 |
|  | AIC | 6,223 | 5,963 | 5,404 | 5,372 |
|  | BIC | 6,299 | 6,051 | 5,502 | 5,510 |

## Summary

Study = *OCTO*; Gender = *male*; Process (a) = *grip*

Computed correlations:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| label | process\_b | a | ae | aeh | aehplus |
| Correlation of Levels | block | 0.54 | 0.51 | 0.45 | 0.49 |
| Correlation of Levels | clock | 0.73 | 0.67 | 0.58 | 0.55 |
| Correlation of Levels | digit\_b | 0.55 | 0.50 | 0.34 | 0.34 |
| Correlation of Levels | digit\_f | 0.35 | 0.18 | 0.10 | 0.14 |
| Correlation of Levels | fig\_logic | 0.66 | 0.68 | 0.59 | 0.64 |
| Correlation of Levels | information | 0.41 | 0.38 | 0.31 | 0.32 |
| Correlation of Levels | mir | 0.60 | 0.55 | 0.50 | 0.49 |
| Correlation of Levels | mir\_recog | 0.64 | 0.58 | 0.51 | 0.49 |
| Correlation of Levels | mmse | 0.73 | 0.64 | 0.58 | 0.55 |
| Correlation of Levels | prose\_im | 0.61 | 0.59 | 0.51 | 0.52 |
| Correlation of Levels | psif | . | . | . | . |
| Correlation of Levels | symbol | 0.51 | 0.50 | 0.43 | 0.48 |
| Correlation of Levels | synonyms | 0.19 | 0.25 | 0.21 | 0.25 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| label | process\_b | a | ae | aeh | aehplus |
| Correlation of Slopes | block | 0.72 | 0.72 | 0.80 | 0.86 |
| Correlation of Slopes | clock | 0.62 | 0.70 | 0.71 | 0.76 |
| Correlation of Slopes | digit\_b | 0.85 | 0.89 | 0.94 | 0.95 |
| Correlation of Slopes | digit\_f | 0.76 | 0.62 | 0.60 | 0.63 |
| Correlation of Slopes | fig\_logic | 0.73 | 0.74 | 0.79 | 0.83 |
| Correlation of Slopes | information | 0.71 | 0.69 | 0.72 | 0.70 |
| Correlation of Slopes | mir | 0.59 | 0.63 | 0.75 | 0.75 |
| Correlation of Slopes | mir\_recog | 0.82 | 0.81 | 0.83 | 0.86 |
| Correlation of Slopes | mmse | 0.74 | 0.78 | 0.81 | 0.81 |
| Correlation of Slopes | prose\_im | 0.92 | 0.92 | 0.94 | 0.96 |
| Correlation of Slopes | psif | . | . | . | . |
| Correlation of Slopes | symbol | 0.84 | 0.83 | 0.85 | 0.89 |
| Correlation of Slopes | synonyms | 0.71 | 0.68 | 0.94 | 0.82 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| label | process\_b | a | ae | aeh | aehplus |
| Correlation of Residuals | block | 0.14 | 0.15 | 0.15 | 0.15 |
| Correlation of Residuals | clock | 0.20 | 0.21 | 0.21 | 0.20 |
| Correlation of Residuals | digit\_b | 0.00 | 0.01 | -0.01 | -0.02 |
| Correlation of Residuals | digit\_f | -0.03 | -0.04 | -0.04 | -0.04 |
| Correlation of Residuals | fig\_logic | -0.09 | -0.09 | -0.08 | -0.07 |
| Correlation of Residuals | information | 0.13 | 0.12 | 0.14 | 0.14 |
| Correlation of Residuals | mir | 0.03 | 0.04 | 0.03 | 0.03 |
| Correlation of Residuals | mir\_recog | 0.06 | 0.07 | 0.07 | 0.07 |
| Correlation of Residuals | mmse | 0.17 | 0.17 | 0.18 | 0.19 |
| Correlation of Residuals | prose\_im | 0.07 | 0.07 | 0.10 | 0.09 |
| Correlation of Residuals | psif | . | . | . | . |
| Correlation of Residuals | symbol | 0.04 | 0.04 | 0.08 | 0.08 |
| Correlation of Residuals | synonyms | 0.03 | 0.03 | 0.01 | 0.03 |

P-values for corresponding covariances:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| label | process\_b | a | ae | aeh | aehplus |
| Covariance of Levels | block | 0.00 | 0.00 | 0.00 | 0.00 |
| Covariance of Levels | clock | 0.00 | 0.00 | 0.00 | 0.00 |
| Covariance of Levels | digit\_b | 0.00 | 0.00 | 0.01 | 0.01 |
| Covariance of Levels | digit\_f | 0.00 | 0.13 | 0.49 | 0.33 |
| Covariance of Levels | fig\_logic | 0.00 | 0.00 | 0.00 | 0.00 |
| Covariance of Levels | information | 0.00 | 0.00 | 0.00 | 0.00 |
| Covariance of Levels | mir | 0.00 | 0.00 | 0.00 | 0.00 |
| Covariance of Levels | mir\_recog | 0.00 | 0.00 | 0.00 | 0.00 |
| Covariance of Levels | mmse | 0.00 | 0.00 | 0.00 | 0.00 |
| Covariance of Levels | prose\_im | 0.00 | 0.00 | 0.00 | 0.00 |
| Covariance of Levels | psif | . | . | . | . |
| Covariance of Levels | symbol | 0.00 | 0.00 | 0.00 | 0.00 |
| Covariance of Levels | synonyms | 0.04 | 0.00 | 0.01 | 0.00 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| label | process\_b | a | ae | aeh | aehplus |
| Covariance of Slopes | block | 0.05 | 0.06 | 0.05 | 0.03 |
| Covariance of Slopes | clock | 0.02 | 0.02 | 0.01 | 0.01 |
| Covariance of Slopes | digit\_b | 0.03 | 0.04 | 0.05 | 0.04 |
| Covariance of Slopes | digit\_f | 0.00 | 0.01 | 0.05 | 0.07 |
| Covariance of Slopes | fig\_logic | 0.16 | 0.15 | 0.19 | 0.23 |
| Covariance of Slopes | information | 0.02 | 0.03 | 0.04 | 0.04 |
| Covariance of Slopes | mir | 0.01 | 0.01 | 0.00 | 0.00 |
| Covariance of Slopes | mir\_recog | 0.00 | 0.00 | 0.00 | 0.00 |
| Covariance of Slopes | mmse | 0.00 | 0.00 | 0.00 | 0.00 |
| Covariance of Slopes | prose\_im | 0.05 | 0.05 | 0.05 | 0.04 |
| Covariance of Slopes | psif | . | . | . | . |
| Covariance of Slopes | symbol | 0.02 | 0.02 | 0.02 | 0.01 |
| Covariance of Slopes | synonyms | 0.18 | 0.17 | 0.06 | 0.18 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| label | process\_b | a | ae | aeh | aehplus |
| Covariance of Residuals | block | 0.03 | 0.02 | 0.03 | 0.04 |
| Covariance of Residuals | clock | 0.00 | 0.00 | 0.00 | 0.00 |
| Covariance of Residuals | digit\_b | 0.94 | 0.93 | 0.86 | 0.76 |
| Covariance of Residuals | digit\_f | 0.65 | 0.50 | 0.50 | 0.51 |
| Covariance of Residuals | fig\_logic | 0.20 | 0.20 | 0.27 | 0.32 |
| Covariance of Residuals | information | 0.08 | 0.09 | 0.07 | 0.07 |
| Covariance of Residuals | mir | 0.66 | 0.63 | 0.74 | 0.74 |
| Covariance of Residuals | mir\_recog | 0.36 | 0.29 | 0.27 | 0.26 |
| Covariance of Residuals | mmse | 0.01 | 0.01 | 0.01 | 0.01 |
| Covariance of Residuals | prose\_im | 0.35 | 0.35 | 0.22 | 0.27 |
| Covariance of Residuals | psif | . | . | . | . |
| Covariance of Residuals | symbol | 0.51 | 0.50 | 0.24 | 0.24 |
| Covariance of Residuals | synonyms | 0.70 | 0.59 | 0.92 | 0.68 |

#Session Info

R version 3.3.2 (2016-10-31)  
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\_2.2.1 magrittr\_1.5 knitr\_1.15.1   
  
loaded via a namespace (and not attached):  
 [1] Rcpp\_0.12.9 munsell\_0.4.3 testit\_0.6 colorspace\_1.3-2 R6\_2.2.0 highr\_0.6   
 [7] stringr\_1.1.0 plyr\_1.8.4 dplyr\_0.5.0 tools\_3.3.2 DT\_0.2 grid\_3.3.2   
[13] gtable\_0.2.0 DBI\_0.5-1 htmltools\_0.3.5 yaml\_2.1.14 lazyeval\_0.2.0 assertthat\_0.1   
[19] rprojroot\_1.2 digest\_0.6.12 tibble\_1.2 readr\_1.0.0 tidyr\_0.6.1 htmlwidgets\_0.8   
[25] rsconnect\_0.7 evaluate\_0.10 rmarkdown\_1.3 stringi\_1.1.2 scales\_0.4.1 backports\_1.0.5