LASA : Seed report

Date: 2016-12-05

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This report contains a searchable table, followed by publication-ready tables.

# Available models

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

|  |  |  |
| --- | --- | --- |
| process\_a | process\_b | n\_models |
| grip | letter | 2 |
| grip | raven | 2 |
| grip | word\_im | 2 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| study\_name | subgroup | model\_type | process\_a | process\_b | n\_models |
| lasa | female | aehplus | grip | letter | 1 |
| lasa | female | aehplus | grip | raven | 1 |
| lasa | female | aehplus | grip | word\_im | 1 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| study\_name | subgroup | model\_type | process\_a | process\_b | n\_models |
| lasa | male | aehplus | grip | letter | 1 |
| lasa | male | aehplus | grip | raven | 1 |
| lasa | male | aehplus | grip | word\_im | 1 |

# female

Gender = *female*; Model type: *aehplus*; Process (a) = *grip*; Process (b): *letter*, *raven*, *word\_im*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| process | label | letter | raven | word\_im | mean(sd) |
| ab | Covar (Levels) | 0.70 (1.29) .59 | 0.29 (0.66) .66 | 1.75 (1.09) .11 | --- |
| ab | Covar (Slopes) | 0.01 (0.01) .40 | 0.00 (0.01) .77 | 0.00 (0.01) .90 | --- |
| ab | Covar (Residuals) | 0.65 (0.23) <.01 | 0.09 (0.24) .70 | 1.68 (0.38) <.01 | --- |
| er | Corr (Levels) | 0.03 (0.06) .59 | 0.03 (0.07) .66 | 0.11 (0.07) .10 | --- |
| er | Corr (Slopes) | 0.40 (0.93) .67 | 0.32 (1.66) .85 | 0.23 (2.09) .91 | --- |
| er | Corr (Residuals) | 0.08 (0.03) <.01 | 0.01 (0.03) .70 | 0.12 (0.03) <.01 | --- |
| a | Level | 19.45 (0.28) <.01 | 19.43 (0.28) <.01 | 19.42 (0.29) <.01 | 19.43(0.01) |
| a | Slope | -0.29 (0.03) <.01 | -0.28 (0.03) <.01 | -0.28 (0.03) <.01 | -0.28(0.01) |
| a | Level \* age | -0.31 (0.02) <.01 | -0.31 (0.02) <.01 | -0.31 (0.02) <.01 | -0.31(0.00) |
| a | Level \* education | 0.08 (0.06) .14 | 0.08 (0.06) .14 | 0.09 (0.06) .13 | 0.09(0.00) |
| a | Level \* height | 0.17 (0.03) <.01 | 0.17 (0.03) <.01 | 0.17 (0.03) <.01 | 0.17(0.00) |
| a | Level \* smoking | -0.59 (0.52) .25 | -0.58 (0.52) .26 | -0.58 (0.52) .26 | -0.58(0.00) |
| a | Level \* cardio | -0.34 (0.44) .44 | -0.36 (0.44) .41 | -0.35 (0.44) .42 | -0.35(0.01) |
| a | Level \* diabetes | -1.94 (0.77) .01 | -1.94 (0.77) .01 | -1.94 (0.77) .01 | -1.94(0.00) |
| a | Slope \* age | -0.01 (0.00) <.01 | -0.01 (0.00) <.01 | -0.01 (0.00) <.01 | -0.01(0.00) |
| a | Slope \* education | -0.00 (0.00) .39 | -0.00 (0.00) .39 | -0.00 (0.00) .36 | -0.00(0.00) |
| a | Slope \* height | -0.00 (0.00) .42 | -0.00 (0.00) .42 | -0.00 (0.00) .39 | -0.00(0.00) |
| a | Slope \* smoking | -0.05 (0.05) .34 | -0.05 (0.05) .33 | -0.05 (0.05) .32 | -0.05(0.00) |
| a | Slope \* cardio | -0.03 (0.04) .44 | -0.02 (0.04) .59 | -0.02 (0.04) .54 | -0.03(0.00) |
| a | Slope \* diabetes | -0.05 (0.08) .58 | -0.05 (0.08) .56 | -0.05 (0.08) .58 | -0.05(0.00) |
| b | Level | 23.53 (0.38) <.01 | 17.29 (0.19) <.01 | 21.44 (0.31) <.01 | --- |
| b | Slope | -0.38 (0.03) <.01 | -0.16 (0.02) <.01 | -0.48 (0.04) <.01 | --- |
| b | Level \* age | -0.38 (0.03) <.01 | -0.18 (0.01) <.01 | -0.38 (0.03) <.01 | --- |
| b | Level \* education | 0.79 (0.07) <.01 | 0.41 (0.03) <.01 | 0.51 (0.06) <.01 | --- |
| b | Level \* height | 0.11 (0.04) <.01 | 0.01 (0.02) .71 | 0.03 (0.03) .28 | --- |
| b | Level \* smoking | -0.63 (0.58) .28 | -0.57 (0.30) .06 | -1.27 (0.54) .02 | --- |
| b | Level \* cardio | -1.39 (0.58) .02 | -0.06 (0.30) .83 | -0.70 (0.53) .18 | --- |
| b | Level \* diabetes | -1.57 (1.04) .13 | -1.14 (0.56) .04 | -0.97 (0.81) .23 | --- |
| b | Slope \* age | -0.01 (0.00) <.01 | -0.00 (0.00) .21 | 0.00 (0.00) .15 | --- |
| b | Slope \* education | 0.00 (0.00) .95 | 0.00 (0.00) .98 | -0.01 (0.01) .14 | --- |
| b | Slope \* height | -0.00 (0.00) .16 | 0.00 (0.00) .91 | 0.00 (0.00) .36 | --- |
| b | Slope \* smoking | 0.01 (0.04) .73 | 0.02 (0.03) .42 | 0.04 (0.06) .52 | --- |
| b | Slope \* cardio | 0.06 (0.06) .28 | -0.06 (0.03) .08 | 0.03 (0.06) .64 | --- |
| b | Slope \* diabetes | 0.04 (0.12) .75 | -0.06 (0.07) .41 | -0.10 (0.10) .37 | --- |
| a | Var (Level) | 15.42 (2.00) <.01 | 15.24 (1.94) <.01 | 15.24 (1.95) <.01 | 15.30(0.10) |
| a | Var (Slope) | 0.01 (0.02) .80 | 0.00 (0.02) .89 | 0.00 (0.02) .91 | 0.00(0.00) |
| a | Var (Residual) | 12.97 (0.69) <.01 | 13.06 (0.70) <.01 | 13.05 (0.70) <.01 | 13.03(0.05) |
| b | Var (Level) | 31.16 (1.77) <.01 | 6.21 (0.46) <.01 | 15.90 (1.64) <.01 | --- |
| b | Var (Slope) | 0.06 (0.01) <.01 | 0.01 (0.01) .03 | 0.01 (0.02) .46 | --- |
| b | Var (Residual) | 5.62 (0.27) <.01 | 5.15 (0.25) <.01 | 15.28 (0.65) <.01 | --- |
| a | Covar (Level, Slope) | -0.14 (0.19) .47 | -0.12 (0.18) .50 | -0.12 (0.18) .52 | -0.12(0.01) |
| b | Covar (Level, Slope) | -0.36 (0.12) <.01 | -0.01 (0.04) .75 | 0.15 (0.15) .32 | --- |
|  | Correlation of Levels | 0.032 | 0.030 | 0.11 | 0.06(0.05) |
|  | Correlation of Slopes | 0.408 | 0.333 | 0.15 | 0.30(0.13) |
|  | Correlation of Residuals | 0.076 | 0.011 | 0.12 | 0.07(0.05) |
|  | N | 782 | 782 | 782 | 782.00(0.00) |
|  | occasions | 6 | 6 | 6 | 6.00(0.00) |
|  | parameters | 41 | 41 | 41 | 41.00(0.00) |
|  | LL | -13,473 | -13,782 | -14,136 | -1.379705e+04(332) |
|  | AIC | 27,028 | 27,646 | 28,355 | 2.767611e+04(664) |
|  | BIC | 27,219 | 27,837 | 28,546 | 2.786724e+04(664) |

## letter

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

|  |  |  |
| --- | --- | --- |
| process | label | aehplus |
| ab | Covar (Levels) | 0.70 (1.29) .59 |
| ab | Covar (Slopes) | 0.01 (0.01) .40 |
| ab | Covar (Residuals) | 0.65 (0.23) <.01 |
| er | Corr (Levels) | 0.03 (0.06) .59 |
| er | Corr (Slopes) | 0.40 (0.93) .67 |
| er | Corr (Residuals) | 0.08 (0.03) <.01 |
| a | Level | 19.45 (0.28) <.01 |
| a | Slope | -0.29 (0.03) <.01 |
| a | Level \* age | -0.31 (0.02) <.01 |
| a | Level \* education | 0.08 (0.06) .14 |
| a | Level \* height | 0.17 (0.03) <.01 |
| a | Level \* smoking | -0.59 (0.52) .25 |
| a | Level \* cardio | -0.34 (0.44) .44 |
| a | Level \* diabetes | -1.94 (0.77) .01 |
| a | Slope \* age | -0.01 (0.00) <.01 |
| a | Slope \* education | -0.00 (0.00) .39 |
| a | Slope \* height | -0.00 (0.00) .42 |
| a | Slope \* smoking | -0.05 (0.05) .34 |
| a | Slope \* cardio | -0.03 (0.04) .44 |
| a | Slope \* diabetes | -0.05 (0.08) .58 |
| b | Level | 23.53 (0.38) <.01 |
| b | Slope | -0.38 (0.03) <.01 |
| b | Level \* age | -0.38 (0.03) <.01 |
| b | Level \* education | 0.79 (0.07) <.01 |
| b | Level \* height | 0.11 (0.04) <.01 |
| b | Level \* smoking | -0.63 (0.58) .28 |
| b | Level \* cardio | -1.39 (0.58) .02 |
| b | Level \* diabetes | -1.57 (1.04) .13 |
| b | Slope \* age | -0.01 (0.00) <.01 |
| b | Slope \* education | 0.00 (0.00) .95 |
| b | Slope \* height | -0.00 (0.00) .16 |
| b | Slope \* smoking | 0.01 (0.04) .73 |
| b | Slope \* cardio | 0.06 (0.06) .28 |
| b | Slope \* diabetes | 0.04 (0.12) .75 |
| a | Var (Level) | 15.42 (2.00) <.01 |
| a | Var (Slope) | 0.01 (0.02) .80 |
| a | Var (Residual) | 12.97 (0.69) <.01 |
| b | Var (Level) | 31.16 (1.77) <.01 |
| b | Var (Slope) | 0.06 (0.01) <.01 |
| b | Var (Residual) | 5.62 (0.27) <.01 |
| a | Covar (Level, Slope) | -0.14 (0.19) .47 |
| b | Covar (Level, Slope) | -0.36 (0.12) <.01 |
|  | Correlation of Levels | 0.032 |
|  | Correlation of Slopes | 0.408 |
|  | Correlation of Residuals | 0.076 |
|  | N | 782 |
|  | occasions | 6 |
|  | parameters | 41 |
|  | LL | -13,473 |
|  | AIC | 27,028 |
|  | BIC | 27,219 |

## raven

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

|  |  |  |
| --- | --- | --- |
| process | label | aehplus |
| ab | Covar (Levels) | 0.29 (0.66) .66 |
| ab | Covar (Slopes) | 0.00 (0.01) .77 |
| ab | Covar (Residuals) | 0.09 (0.24) .70 |
| er | Corr (Levels) | 0.03 (0.07) .66 |
| er | Corr (Slopes) | 0.32 (1.66) .85 |
| er | Corr (Residuals) | 0.01 (0.03) .70 |
| a | Level | 19.43 (0.28) <.01 |
| a | Slope | -0.28 (0.03) <.01 |
| a | Level \* age | -0.31 (0.02) <.01 |
| a | Level \* education | 0.08 (0.06) .14 |
| a | Level \* height | 0.17 (0.03) <.01 |
| a | Level \* smoking | -0.58 (0.52) .26 |
| a | Level \* cardio | -0.36 (0.44) .41 |
| a | Level \* diabetes | -1.94 (0.77) .01 |
| a | Slope \* age | -0.01 (0.00) <.01 |
| a | Slope \* education | -0.00 (0.00) .39 |
| a | Slope \* height | -0.00 (0.00) .42 |
| a | Slope \* smoking | -0.05 (0.05) .33 |
| a | Slope \* cardio | -0.02 (0.04) .59 |
| a | Slope \* diabetes | -0.05 (0.08) .56 |
| b | Level | 17.29 (0.19) <.01 |
| b | Slope | -0.16 (0.02) <.01 |
| b | Level \* age | -0.18 (0.01) <.01 |
| b | Level \* education | 0.41 (0.03) <.01 |
| b | Level \* height | 0.01 (0.02) .71 |
| b | Level \* smoking | -0.57 (0.30) .06 |
| b | Level \* cardio | -0.06 (0.30) .83 |
| b | Level \* diabetes | -1.14 (0.56) .04 |
| b | Slope \* age | -0.00 (0.00) .21 |
| b | Slope \* education | 0.00 (0.00) .98 |
| b | Slope \* height | 0.00 (0.00) .91 |
| b | Slope \* smoking | 0.02 (0.03) .42 |
| b | Slope \* cardio | -0.06 (0.03) .08 |
| b | Slope \* diabetes | -0.06 (0.07) .41 |
| a | Var (Level) | 15.24 (1.94) <.01 |
| a | Var (Slope) | 0.00 (0.02) .89 |
| a | Var (Residual) | 13.06 (0.70) <.01 |
| b | Var (Level) | 6.21 (0.46) <.01 |
| b | Var (Slope) | 0.01 (0.01) .03 |
| b | Var (Residual) | 5.15 (0.25) <.01 |
| a | Covar (Level, Slope) | -0.12 (0.18) .50 |
| b | Covar (Level, Slope) | -0.01 (0.04) .75 |
|  | Correlation of Levels | 0.030 |
|  | Correlation of Slopes | 0.333 |
|  | Correlation of Residuals | 0.011 |
|  | N | 782 |
|  | occasions | 6 |
|  | parameters | 41 |
|  | LL | -13,782 |
|  | AIC | 27,646 |
|  | BIC | 27,837 |

## word\_im

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

|  |  |  |
| --- | --- | --- |
| process | label | aehplus |
| ab | Covar (Levels) | 1.75 (1.09) .11 |
| ab | Covar (Slopes) | 0.00 (0.01) .90 |
| ab | Covar (Residuals) | 1.68 (0.38) <.01 |
| er | Corr (Levels) | 0.11 (0.07) .10 |
| er | Corr (Slopes) | 0.23 (2.09) .91 |
| er | Corr (Residuals) | 0.12 (0.03) <.01 |
| a | Level | 19.42 (0.29) <.01 |
| a | Slope | -0.28 (0.03) <.01 |
| a | Level \* age | -0.31 (0.02) <.01 |
| a | Level \* education | 0.09 (0.06) .13 |
| a | Level \* height | 0.17 (0.03) <.01 |
| a | Level \* smoking | -0.58 (0.52) .26 |
| a | Level \* cardio | -0.35 (0.44) .42 |
| a | Level \* diabetes | -1.94 (0.77) .01 |
| a | Slope \* age | -0.01 (0.00) <.01 |
| a | Slope \* education | -0.00 (0.00) .36 |
| a | Slope \* height | -0.00 (0.00) .39 |
| a | Slope \* smoking | -0.05 (0.05) .32 |
| a | Slope \* cardio | -0.02 (0.04) .54 |
| a | Slope \* diabetes | -0.05 (0.08) .58 |
| b | Level | 21.44 (0.31) <.01 |
| b | Slope | -0.48 (0.04) <.01 |
| b | Level \* age | -0.38 (0.03) <.01 |
| b | Level \* education | 0.51 (0.06) <.01 |
| b | Level \* height | 0.03 (0.03) .28 |
| b | Level \* smoking | -1.27 (0.54) .02 |
| b | Level \* cardio | -0.70 (0.53) .18 |
| b | Level \* diabetes | -0.97 (0.81) .23 |
| b | Slope \* age | 0.00 (0.00) .15 |
| b | Slope \* education | -0.01 (0.01) .14 |
| b | Slope \* height | 0.00 (0.00) .36 |
| b | Slope \* smoking | 0.04 (0.06) .52 |
| b | Slope \* cardio | 0.03 (0.06) .64 |
| b | Slope \* diabetes | -0.10 (0.10) .37 |
| a | Var (Level) | 15.24 (1.95) <.01 |
| a | Var (Slope) | 0.00 (0.02) .91 |
| a | Var (Residual) | 13.05 (0.70) <.01 |
| b | Var (Level) | 15.90 (1.64) <.01 |
| b | Var (Slope) | 0.01 (0.02) .46 |
| b | Var (Residual) | 15.28 (0.65) <.01 |
| a | Covar (Level, Slope) | -0.12 (0.18) .52 |
| b | Covar (Level, Slope) | 0.15 (0.15) .32 |
|  | Correlation of Levels | 0.11 |
|  | Correlation of Slopes | 0.15 |
|  | Correlation of Residuals | 0.12 |
|  | N | 782 |
|  | occasions | 6 |
|  | parameters | 41 |
|  | LL | -14,136 |
|  | AIC | 28,355 |
|  | BIC | 28,546 |

## Summary

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

Computed correlations:

|  |  |  |
| --- | --- | --- |
| label | process\_b | aehplus |
| Correlation of Levels | letter | 0.03 |
| Correlation of Levels | raven | 0.03 |
| Correlation of Levels | word\_im | 0.11 |

|  |  |  |
| --- | --- | --- |
| label | process\_b | aehplus |
| Correlation of Slopes | letter | 0.41 |
| Correlation of Slopes | raven | 0.33 |
| Correlation of Slopes | word\_im | 0.15 |

|  |  |  |
| --- | --- | --- |
| label | process\_b | aehplus |
| Correlation of Residuals | letter | 0.08 |
| Correlation of Residuals | raven | 0.01 |
| Correlation of Residuals | word\_im | 0.12 |

P-values for corresponding covariances:

|  |  |  |
| --- | --- | --- |
| label | process\_b | aehplus |
| Covariance of Levels | letter | 0.59 |
| Covariance of Levels | raven | 0.66 |
| Covariance of Levels | word\_im | 0.11 |

|  |  |  |
| --- | --- | --- |
| label | process\_b | aehplus |
| Covariance of Slopes | letter | 0.40 |
| Covariance of Slopes | raven | 0.77 |
| Covariance of Slopes | word\_im | 0.90 |

|  |  |  |
| --- | --- | --- |
| label | process\_b | aehplus |
| Covariance of Residuals | letter | 0.00 |
| Covariance of Residuals | raven | 0.70 |
| Covariance of Residuals | word\_im | 0.00 |

# male

Gender = *male*; Model type: *aehplus*; Process (a) = *grip*; Process (b): *letter*, *raven*, *word\_im*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| process | label | letter | raven | word\_im | mean(sd) |
| ab | Covar (Levels) | 3.28 (1.69) .05 | 2.65 (0.89) <.01 | 1.76 (1.54) .25 | --- |
| ab | Covar (Slopes) | 0.03 (0.02) .09 | 0.02 (0.01) .02 | 0.00 (0.01) .84 | --- |
| ab | Covar (Residuals) | 0.96 (0.39) .01 | 0.70 (0.31) .03 | 2.25 (0.53) <.01 | --- |
| er | Corr (Levels) | 0.10 (0.05) .05 | 0.17 (0.05) <.01 | 0.07 (0.06) .25 | --- |
| er | Corr (Slopes) | 0.61 (0.41) .13 | 0.93 (0.69) .18 | 0.16 (0.80) .84 | --- |
| er | Corr (Residuals) | 0.09 (0.03) .01 | 0.07 (0.03) .02 | 0.14 (0.03) <.01 | --- |
| a | Level | 34.02 (0.49) <.01 | 33.98 (0.49) <.01 | 34.05 (0.49) <.01 | 34.02(0.03) |
| a | Slope | -0.61 (0.06) <.01 | -0.59 (0.06) <.01 | -0.61 (0.06) <.01 | -0.60(0.01) |
| a | Level \* age | -0.46 (0.04) <.01 | -0.46 (0.04) <.01 | -0.46 (0.04) <.01 | -0.46(0.00) |
| a | Level \* education | -0.09 (0.08) .26 | -0.10 (0.08) .24 | -0.10 (0.08) .24 | -0.10(0.00) |
| a | Level \* height | 0.22 (0.04) <.01 | 0.22 (0.04) <.01 | 0.22 (0.04) <.01 | 0.22(0.00) |
| a | Level \* smoking | 0.26 (0.62) .67 | 0.26 (0.61) .67 | 0.24 (0.62) .69 | 0.26(0.01) |
| a | Level \* cardio | 0.37 (0.61) .55 | 0.40 (0.61) .51 | 0.37 (0.61) .55 | 0.38(0.02) |
| a | Level \* diabetes | -2.94 (1.44) .04 | -2.94 (1.45) .04 | -2.98 (1.44) .04 | -2.96(0.02) |
| a | Slope \* age | -0.03 (0.00) <.01 | -0.03 (0.00) <.01 | -0.03 (0.00) <.01 | -0.03(0.00) |
| a | Slope \* education | 0.01 (0.01) .23 | 0.01 (0.01) .20 | 0.01 (0.01) .19 | 0.01(0.00) |
| a | Slope \* height | -0.00 (0.00) .46 | -0.00 (0.00) .38 | -0.00 (0.00) .42 | -0.00(0.00) |
| a | Slope \* smoking | -0.11 (0.06) .06 | -0.11 (0.06) .05 | -0.11 (0.06) .06 | -0.11(0.00) |
| a | Slope \* cardio | -0.05 (0.06) .43 | -0.05 (0.06) .42 | -0.04 (0.06) .49 | -0.05(0.00) |
| a | Slope \* diabetes | -0.30 (0.12) .02 | -0.29 (0.12) .02 | -0.30 (0.12) .01 | -0.30(0.00) |
| b | Level | 21.91 (0.37) <.01 | 17.23 (0.20) <.01 | 17.89 (0.30) <.01 | --- |
| b | Slope | -0.39 (0.04) <.01 | -0.16 (0.02) <.01 | -0.32 (0.04) <.01 | --- |
| b | Level \* age | -0.35 (0.03) <.01 | -0.18 (0.01) <.01 | -0.35 (0.02) <.01 | --- |
| b | Level \* education | 0.76 (0.06) <.01 | 0.36 (0.03) <.01 | 0.41 (0.06) <.01 | --- |
| b | Level \* height | 0.11 (0.03) <.01 | 0.05 (0.01) <.01 | 0.06 (0.03) .02 | --- |
| b | Level \* smoking | -0.81 (0.46) .08 | -0.08 (0.24) .75 | -0.09 (0.41) .82 | --- |
| b | Level \* cardio | -0.39 (0.47) .41 | -0.48 (0.26) .06 | -0.07 (0.40) .86 | --- |
| b | Level \* diabetes | -1.21 (1.01) .23 | -1.26 (0.54) .02 | -1.52 (0.89) .09 | --- |
| b | Slope \* age | -0.01 (0.00) <.01 | -0.00 (0.00) .08 | 0.00 (0.00) .22 | --- |
| b | Slope \* education | -0.01 (0.01) .05 | -0.00 (0.00) .51 | -0.01 (0.01) .02 | --- |
| b | Slope \* height | 0.00 (0.00) .77 | 0.00 (0.00) .82 | -0.00 (0.00) .50 | --- |
| b | Slope \* smoking | -0.07 (0.05) .11 | -0.02 (0.03) .48 | -0.09 (0.05) .05 | --- |
| b | Slope \* cardio | -0.03 (0.04) .48 | 0.00 (0.03) .87 | -0.03 (0.05) .60 | --- |
| b | Slope \* diabetes | -0.18 (0.09) .04 | -0.05 (0.05) .34 | -0.19 (0.08) .01 | --- |
| a | Var (Level) | 39.12 (3.66) <.01 | 39.11 (3.67) <.01 | 39.24 (3.69) <.01 | 39.16(0.07) |
| a | Var (Slope) | 0.03 (0.04) .45 | 0.02 (0.03) .47 | 0.03 (0.04) .39 | 0.03(0.00) |
| a | Var (Residual) | 21.16 (1.19) <.01 | 21.22 (1.20) <.01 | 21.11 (1.19) <.01 | 21.16(0.06) |
| b | Var (Level) | 27.09 (1.70) <.01 | 6.46 (0.47) <.01 | 14.30 (1.49) <.01 | --- |
| b | Var (Slope) | 0.07 (0.02) <.01 | 0.02 (0.01) .01 | 0.01 (0.02) .55 | --- |
| b | Var (Residual) | 5.73 (0.35) <.01 | 4.03 (0.22) <.01 | 12.81 (0.58) <.01 | --- |
| a | Covar (Level, Slope) | -0.32 (0.30) .28 | -0.33 (0.29) .26 | -0.35 (0.30) .24 | -0.33(0.02) |
| b | Covar (Level, Slope) | -0.24 (0.13) .06 | -0.03 (0.04) .54 | 0.01 (0.14) .95 | --- |
|  | Correlation of Levels | 0.101 | 0.167 | 0.074 | 0.11(0.05) |
|  | Correlation of Slopes | 0.600 | 0.922 | 0.173 | 0.56(0.38) |
|  | Correlation of Residuals | 0.087 | 0.075 | 0.137 | 0.10(0.03) |
|  | N | 800 | 800 | 800 | 800.00(0.00) |
|  | occasions | 6 | 6 | 6 | 6.00(0.00) |
|  | parameters | 41 | 41 | 41 | 41.00(0.00) |
|  | LL | -13,320 | -13,392 | -13,675 | -1.346250e+04(188) |
|  | AIC | 26,721 | 26,867 | 27,433 | 2.700701e+04(376) |
|  | BIC | 26,913 | 27,059 | 27,625 | 2.719908e+04(376) |

## letter

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

|  |  |  |
| --- | --- | --- |
| process | label | aehplus |
| ab | Covar (Levels) | 3.28 (1.69) .05 |
| ab | Covar (Slopes) | 0.03 (0.02) .09 |
| ab | Covar (Residuals) | 0.96 (0.39) .01 |
| er | Corr (Levels) | 0.10 (0.05) .05 |
| er | Corr (Slopes) | 0.61 (0.41) .13 |
| er | Corr (Residuals) | 0.09 (0.03) .01 |
| a | Level | 34.02 (0.49) <.01 |
| a | Slope | -0.61 (0.06) <.01 |
| a | Level \* age | -0.46 (0.04) <.01 |
| a | Level \* education | -0.09 (0.08) .26 |
| a | Level \* height | 0.22 (0.04) <.01 |
| a | Level \* smoking | 0.26 (0.62) .67 |
| a | Level \* cardio | 0.37 (0.61) .55 |
| a | Level \* diabetes | -2.94 (1.44) .04 |
| a | Slope \* age | -0.03 (0.00) <.01 |
| a | Slope \* education | 0.01 (0.01) .23 |
| a | Slope \* height | -0.00 (0.00) .46 |
| a | Slope \* smoking | -0.11 (0.06) .06 |
| a | Slope \* cardio | -0.05 (0.06) .43 |
| a | Slope \* diabetes | -0.30 (0.12) .02 |
| b | Level | 21.91 (0.37) <.01 |
| b | Slope | -0.39 (0.04) <.01 |
| b | Level \* age | -0.35 (0.03) <.01 |
| b | Level \* education | 0.76 (0.06) <.01 |
| b | Level \* height | 0.11 (0.03) <.01 |
| b | Level \* smoking | -0.81 (0.46) .08 |
| b | Level \* cardio | -0.39 (0.47) .41 |
| b | Level \* diabetes | -1.21 (1.01) .23 |
| b | Slope \* age | -0.01 (0.00) <.01 |
| b | Slope \* education | -0.01 (0.01) .05 |
| b | Slope \* height | 0.00 (0.00) .77 |
| b | Slope \* smoking | -0.07 (0.05) .11 |
| b | Slope \* cardio | -0.03 (0.04) .48 |
| b | Slope \* diabetes | -0.18 (0.09) .04 |
| a | Var (Level) | 39.12 (3.66) <.01 |
| a | Var (Slope) | 0.03 (0.04) .45 |
| a | Var (Residual) | 21.16 (1.19) <.01 |
| b | Var (Level) | 27.09 (1.70) <.01 |
| b | Var (Slope) | 0.07 (0.02) <.01 |
| b | Var (Residual) | 5.73 (0.35) <.01 |
| a | Covar (Level, Slope) | -0.32 (0.30) .28 |
| b | Covar (Level, Slope) | -0.24 (0.13) .06 |
|  | Correlation of Levels | 0.101 |
|  | Correlation of Slopes | 0.600 |
|  | Correlation of Residuals | 0.087 |
|  | N | 800 |
|  | occasions | 6 |
|  | parameters | 41 |
|  | LL | -13,320 |
|  | AIC | 26,721 |
|  | BIC | 26,913 |

## raven

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

|  |  |  |
| --- | --- | --- |
| process | label | aehplus |
| ab | Covar (Levels) | 2.65 (0.89) <.01 |
| ab | Covar (Slopes) | 0.02 (0.01) .02 |
| ab | Covar (Residuals) | 0.70 (0.31) .03 |
| er | Corr (Levels) | 0.17 (0.05) <.01 |
| er | Corr (Slopes) | 0.93 (0.69) .18 |
| er | Corr (Residuals) | 0.07 (0.03) .02 |
| a | Level | 33.98 (0.49) <.01 |
| a | Slope | -0.59 (0.06) <.01 |
| a | Level \* age | -0.46 (0.04) <.01 |
| a | Level \* education | -0.10 (0.08) .24 |
| a | Level \* height | 0.22 (0.04) <.01 |
| a | Level \* smoking | 0.26 (0.61) .67 |
| a | Level \* cardio | 0.40 (0.61) .51 |
| a | Level \* diabetes | -2.94 (1.45) .04 |
| a | Slope \* age | -0.03 (0.00) <.01 |
| a | Slope \* education | 0.01 (0.01) .20 |
| a | Slope \* height | -0.00 (0.00) .38 |
| a | Slope \* smoking | -0.11 (0.06) .05 |
| a | Slope \* cardio | -0.05 (0.06) .42 |
| a | Slope \* diabetes | -0.29 (0.12) .02 |
| b | Level | 17.23 (0.20) <.01 |
| b | Slope | -0.16 (0.02) <.01 |
| b | Level \* age | -0.18 (0.01) <.01 |
| b | Level \* education | 0.36 (0.03) <.01 |
| b | Level \* height | 0.05 (0.01) <.01 |
| b | Level \* smoking | -0.08 (0.24) .75 |
| b | Level \* cardio | -0.48 (0.26) .06 |
| b | Level \* diabetes | -1.26 (0.54) .02 |
| b | Slope \* age | -0.00 (0.00) .08 |
| b | Slope \* education | -0.00 (0.00) .51 |
| b | Slope \* height | 0.00 (0.00) .82 |
| b | Slope \* smoking | -0.02 (0.03) .48 |
| b | Slope \* cardio | 0.00 (0.03) .87 |
| b | Slope \* diabetes | -0.05 (0.05) .34 |
| a | Var (Level) | 39.11 (3.67) <.01 |
| a | Var (Slope) | 0.02 (0.03) .47 |
| a | Var (Residual) | 21.22 (1.20) <.01 |
| b | Var (Level) | 6.46 (0.47) <.01 |
| b | Var (Slope) | 0.02 (0.01) .01 |
| b | Var (Residual) | 4.03 (0.22) <.01 |
| a | Covar (Level, Slope) | -0.33 (0.29) .26 |
| b | Covar (Level, Slope) | -0.03 (0.04) .54 |
|  | Correlation of Levels | 0.167 |
|  | Correlation of Slopes | 0.922 |
|  | Correlation of Residuals | 0.075 |
|  | N | 800 |
|  | occasions | 6 |
|  | parameters | 41 |
|  | LL | -13,392 |
|  | AIC | 26,867 |
|  | BIC | 27,059 |

## word\_im

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

|  |  |  |
| --- | --- | --- |
| process | label | aehplus |
| ab | Covar (Levels) | 1.76 (1.54) .25 |
| ab | Covar (Slopes) | 0.00 (0.01) .84 |
| ab | Covar (Residuals) | 2.25 (0.53) <.01 |
| er | Corr (Levels) | 0.07 (0.06) .25 |
| er | Corr (Slopes) | 0.16 (0.80) .84 |
| er | Corr (Residuals) | 0.14 (0.03) <.01 |
| a | Level | 34.05 (0.49) <.01 |
| a | Slope | -0.61 (0.06) <.01 |
| a | Level \* age | -0.46 (0.04) <.01 |
| a | Level \* education | -0.10 (0.08) .24 |
| a | Level \* height | 0.22 (0.04) <.01 |
| a | Level \* smoking | 0.24 (0.62) .69 |
| a | Level \* cardio | 0.37 (0.61) .55 |
| a | Level \* diabetes | -2.98 (1.44) .04 |
| a | Slope \* age | -0.03 (0.00) <.01 |
| a | Slope \* education | 0.01 (0.01) .19 |
| a | Slope \* height | -0.00 (0.00) .42 |
| a | Slope \* smoking | -0.11 (0.06) .06 |
| a | Slope \* cardio | -0.04 (0.06) .49 |
| a | Slope \* diabetes | -0.30 (0.12) .01 |
| b | Level | 17.89 (0.30) <.01 |
| b | Slope | -0.32 (0.04) <.01 |
| b | Level \* age | -0.35 (0.02) <.01 |
| b | Level \* education | 0.41 (0.06) <.01 |
| b | Level \* height | 0.06 (0.03) .02 |
| b | Level \* smoking | -0.09 (0.41) .82 |
| b | Level \* cardio | -0.07 (0.40) .86 |
| b | Level \* diabetes | -1.52 (0.89) .09 |
| b | Slope \* age | 0.00 (0.00) .22 |
| b | Slope \* education | -0.01 (0.01) .02 |
| b | Slope \* height | -0.00 (0.00) .50 |
| b | Slope \* smoking | -0.09 (0.05) .05 |
| b | Slope \* cardio | -0.03 (0.05) .60 |
| b | Slope \* diabetes | -0.19 (0.08) .01 |
| a | Var (Level) | 39.24 (3.69) <.01 |
| a | Var (Slope) | 0.03 (0.04) .39 |
| a | Var (Residual) | 21.11 (1.19) <.01 |
| b | Var (Level) | 14.30 (1.49) <.01 |
| b | Var (Slope) | 0.01 (0.02) .55 |
| b | Var (Residual) | 12.81 (0.58) <.01 |
| a | Covar (Level, Slope) | -0.35 (0.30) .24 |
| b | Covar (Level, Slope) | 0.01 (0.14) .95 |
|  | Correlation of Levels | 0.074 |
|  | Correlation of Slopes | 0.173 |
|  | Correlation of Residuals | 0.137 |
|  | N | 800 |
|  | occasions | 6 |
|  | parameters | 41 |
|  | LL | -13,675 |
|  | AIC | 27,433 |
|  | BIC | 27,625 |

## Summary

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

Computed correlations:

|  |  |  |
| --- | --- | --- |
| label | process\_b | aehplus |
| Correlation of Levels | letter | 0.10 |
| Correlation of Levels | raven | 0.17 |
| Correlation of Levels | word\_im | 0.07 |

|  |  |  |
| --- | --- | --- |
| label | process\_b | aehplus |
| Correlation of Slopes | letter | 0.60 |
| Correlation of Slopes | raven | 0.92 |
| Correlation of Slopes | word\_im | 0.17 |

|  |  |  |
| --- | --- | --- |
| label | process\_b | aehplus |
| Correlation of Residuals | letter | 0.09 |
| Correlation of Residuals | raven | 0.08 |
| Correlation of Residuals | word\_im | 0.14 |

P-values for corresponding covariances:

|  |  |  |
| --- | --- | --- |
| label | process\_b | aehplus |
| Covariance of Levels | letter | 0.05 |
| Covariance of Levels | raven | 0.00 |
| Covariance of Levels | word\_im | 0.25 |

|  |  |  |
| --- | --- | --- |
| label | process\_b | aehplus |
| Covariance of Slopes | letter | 0.09 |
| Covariance of Slopes | raven | 0.02 |
| Covariance of Slopes | word\_im | 0.84 |

|  |  |  |
| --- | --- | --- |
| label | process\_b | aehplus |
| Covariance of Residuals | letter | 0.01 |
| Covariance of Residuals | raven | 0.03 |
| Covariance of Residuals | word\_im | 0.00 |

#Session Info

R version 3.3.1 (2016-06-21)  
Platform: x86\_64-w64-mingw32/x64 (64-bit)  
Running under: Windows >= 8 x64 (build 9200)  
  
locale:  
[1] LC\_COLLATE=English\_United States.1252 LC\_CTYPE=English\_United States.1252 LC\_MONETARY=English\_United States.1252  
[4] LC\_NUMERIC=C LC\_TIME=English\_United States.1252   
  
attached base packages:  
[1] stats graphics grDevices utils datasets methods base   
  
other attached packages:  
[1] knitr\_1.14 ggplot2\_2.2.0 IalsaSynthesis\_0.1.8.9000 MplusAutomation\_0.6-4   
[5] magrittr\_1.5   
  
loaded via a namespace (and not attached):  
 [1] Rcpp\_0.12.7 formatR\_1.4 plyr\_1.8.4 highr\_0.6 tools\_3.3.1 boot\_1.3-18   
 [7] digest\_0.6.10 evaluate\_0.10 tibble\_1.2 gtable\_0.2.0 lattice\_0.20-34 texreg\_1.36.7   
[13] DBI\_0.5-1 yaml\_2.1.13 proto\_0.3-10 coda\_0.18-1 dplyr\_0.5.0 stringr\_1.1.0   
[19] htmlwidgets\_0.7 grid\_3.3.1 DT\_0.2 data.table\_1.9.6 R6\_2.2.0 rmarkdown\_1.1   
[25] gsubfn\_0.6-6 pander\_0.6.0 tidyr\_0.6.0 reshape2\_1.4.1 readr\_1.0.0 scales\_0.4.1   
[31] htmltools\_0.3.5 rsconnect\_0.5 assertthat\_0.1 testit\_0.5 colorspace\_1.2-7 xtable\_1.8-2   
[37] stringi\_1.1.2 lazyeval\_0.2.0 munsell\_0.4.3 chron\_2.3-47