HRS : Seed Report

Date: 2016-12-05

Table of Contents

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

# Available models

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

|  |  |  |
| --- | --- | --- |
| process\_a | process\_b | n\_models |
| gait | serial7 | 6 |
| gait | tics | 6 |
| gait | word\_de | 6 |
| gait | word\_im | 6 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| study\_name | subgroup | model\_type | process\_a | process\_b | n\_models |
| hrs | female | a | gait | serial7 | 1 |
| hrs | female | a | gait | tics | 1 |
| hrs | female | a | gait | word\_de | 1 |
| hrs | female | a | gait | word\_im | 1 |
| hrs | female | aeh | gait | serial7 | 1 |
| hrs | female | aeh | gait | tics | 1 |
| hrs | female | aeh | gait | word\_de | 1 |
| hrs | female | aeh | gait | word\_im | 1 |
| hrs | female | aehplus | gait | serial7 | 1 |
| hrs | female | aehplus | gait | tics | 1 |
| hrs | female | aehplus | gait | word\_de | 1 |
| hrs | female | aehplus | gait | word\_im | 1 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| study\_name | subgroup | model\_type | process\_a | process\_b | n\_models |
| hrs | male | a | gait | serial7 | 1 |
| hrs | male | a | gait | tics | 1 |
| hrs | male | a | gait | word\_de | 1 |
| hrs | male | a | gait | word\_im | 1 |
| hrs | male | aeh | gait | serial7 | 1 |
| hrs | male | aeh | gait | tics | 1 |
| hrs | male | aeh | gait | word\_de | 1 |
| hrs | male | aeh | gait | word\_im | 1 |
| hrs | male | aehplus | gait | serial7 | 1 |
| hrs | male | aehplus | gait | tics | 1 |
| hrs | male | aehplus | gait | word\_de | 1 |
| hrs | male | aehplus | gait | word\_im | 1 |

# female

Gender = *female*; Model type: *aehplus*; Process (a) = *gait*; Process (b): *serial7*, *tics*, *word\_de*, *word\_im*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| process | label | serial7 | tics | word\_de | word\_im | mean(sd) |
| ab | Covar (Levels) | 0.02 (0.02) .20 | 0.01 (0.01) .14 | 0.03 (0.02) .17 | 0.04 (0.01) .01 | --- |
| ab | Covar (Slopes) | 0.00 (0.00) .60 | 0.00 (0.00) .13 | 0.00 (0.00) .53 | 0.00 (0.00) .44 | --- |
| ab | Covar (Residuals) | 0.01 (0.01) .18 | 0.00 (0.01) .70 | 0.01 (0.01) .15 | 0.00 (0.01) .60 | --- |
| er | Corr (Levels) | --- | --- | --- | --- | --- |
| er | Corr (Slopes) | --- | --- | --- | --- | --- |
| er | Corr (Residuals) | --- | --- | --- | --- | --- |
| a | Level | 0.79 (0.02) <.01 | 0.79 (0.02) <.01 | 0.79 (0.02) <.01 | 0.79 (0.02) <.01 | 0.79(0.00) |
| a | Slope | -0.03 (0.00) <.01 | -0.03 (0.00) <.01 | -0.03 (0.00) <.01 | -0.03 (0.00) <.01 | -0.03(0.00) |
| a | Level \* age | -0.01 (0.00) <.01 | -0.01 (0.00) <.01 | -0.01 (0.00) <.01 | -0.01 (0.00) <.01 | -0.01(0.00) |
| a | Level \* education | 0.01 (0.00) <.01 | 0.01 (0.00) <.01 | 0.01 (0.00) <.01 | 0.01 (0.00) <.01 | 0.01(0.00) |
| a | Level \* height | 0.16 (0.19) .41 | 0.16 (0.19) .38 | 0.16 (0.19) .38 | 0.17 (0.19) .38 | 0.16(0.00) |
| a | Level \* smoking | -0.04 (0.04) .35 | -0.04 (0.04) .28 | -0.04 (0.04) .28 | -0.04 (0.04) .29 | -0.04(0.00) |
| a | Level \* cardio | -0.03 (0.02) .17 | -0.03 (0.02) .16 | -0.04 (0.02) .15 | -0.03 (0.02) .15 | -0.03(0.00) |
| a | Level \* diabetes | -0.06 (0.03) .02 | -0.06 (0.03) .02 | -0.06 (0.03) .02 | -0.06 (0.03) .02 | -0.06(0.00) |
| a | Slope \* age | -0.00 (0.00) <.01 | -0.00 (0.00) <.01 | -0.00 (0.00) <.01 | -0.00 (0.00) <.01 | -0.00(0.00) |
| a | Slope \* education | 0.00 (0.00) .11 | 0.00 (0.00) .03 | 0.00 (0.00) .06 | 0.00 (0.00) .06 | 0.00(0.00) |
| a | Slope \* height | -0.03 (0.04) .47 | -0.04 (0.04) .40 | -0.04 (0.04) .38 | -0.04 (0.04) .37 | -0.04(0.00) |
| a | Slope \* smoking | -0.00 (0.01) .80 | 0.00 (0.01) .68 | 0.00 (0.01) .71 | 0.00 (0.01) .79 | 0.00(0.00) |
| a | Slope \* cardio | -0.00 (0.00) .88 | 0.00 (0.00) .99 | 0.00 (0.00) .84 | 0.00 (0.00) .90 | 0.00(0.00) |
| a | Slope \* diabetes | 0.00 (0.01) .99 | 0.00 (0.01) .85 | 0.00 (0.01) .99 | 0.00 (0.01) .99 | 0.00(0.00) |
| b | Level | 2.26 (0.19) <.01 | 9.00 (0.14) <.01 | 3.94 (0.19) <.01 | 5.12 (0.16) <.01 | --- |
| b | Slope | -0.04 (0.03) .23 | -0.07 (0.02) .01 | -0.00 (0.03) .87 | -0.06 (0.03) .03 | --- |
| b | Level \* age | -0.01 (0.01) .46 | -0.03 (0.01) <.01 | -0.09 (0.01) <.01 | -0.06 (0.01) <.01 | --- |
| b | Level \* education | 0.23 (0.02) <.01 | 0.12 (0.02) <.01 | 0.14 (0.03) <.01 | 0.12 (0.02) <.01 | --- |
| b | Level \* height | 1.06 (1.26) .40 | 0.26 (0.85) .76 | -0.23 (1.25) .86 | 0.08 (0.98) .94 | --- |
| b | Level \* smoking | 0.64 (0.36) .08 | -0.17 (0.24) .48 | 0.59 (0.49) .23 | 0.40 (0.26) .12 | --- |
| b | Level \* cardio | -0.14 (0.17) .42 | -0.00 (0.11) .97 | -0.24 (0.19) .20 | -0.21 (0.14) .14 | --- |
| b | Level \* diabetes | 0.26 (0.18) .15 | 0.06 (0.11) .57 | -0.38 (0.21) .07 | -0.24 (0.16) .15 | --- |
| b | Slope \* age | -0.01 (0.00) <.01 | -0.01 (0.00) <.01 | -0.01 (0.00) <.01 | -0.01 (0.00) <.01 | --- |
| b | Slope \* education | -0.01 (0.00) .02 | -0.00 (0.00) .83 | -0.01 (0.00) .03 | -0.00 (0.00) .45 | --- |
| b | Slope \* height | 0.17 (0.18) .34 | 0.07 (0.19) .70 | 0.13 (0.18) .47 | 0.22 (0.14) .11 | --- |
| b | Slope \* smoking | -0.15 (0.08) .08 | 0.08 (0.06) .14 | -0.24 (0.07) <.01 | -0.20 (0.06) <.01 | --- |
| b | Slope \* cardio | -0.04 (0.03) .16 | -0.01 (0.02) .71 | -0.02 (0.03) .64 | -0.01 (0.02) .66 | --- |
| b | Slope \* diabetes | -0.06 (0.04) .12 | 0.00 (0.03) .93 | -0.01 (0.04) .84 | 0.01 (0.03) .75 | --- |
| a | Var (Level) | 0.02 (0.00) <.01 | 0.02 (0.00) <.01 | 0.02 (0.00) <.01 | 0.02 (0.00) <.01 | 0.02(0.00) |
| a | Var (Slope) | 0.00 (0.00) .50 | 0.00 (0.00) .31 | 0.00 (0.00) .46 | 0.00 (0.00) .32 | 0.00(0.00) |
| a | Var (Residual) | 0.03 (0.00) <.01 | 0.03 (0.00) <.01 | 0.03 (0.00) <.01 | 0.03 (0.00) <.01 | 0.03(0.00) |
| b | Var (Level) | 1.42 (0.15) <.01 | 0.29 (0.10) <.01 | 1.36 (0.24) <.01 | 0.78 (0.15) <.01 | --- |
| b | Var (Slope) | 0.03 (0.00) <.01 | 0.02 (0.01) .01 | 0.01 (0.01) .24 | 0.00 (0.00) .60 | --- |
| b | Var (Residual) | 1.31 (0.07) <.01 | 0.75 (0.06) <.01 | 1.84 (0.12) <.01 | 1.25 (0.07) <.01 | --- |
| a | Covar (Level, Slope) | -0.00 (0.00) .49 | -0.00 (0.00) .32 | -0.00 (0.00) .41 | -0.00 (0.00) .28 | -0.00(0.00) |
| b | Covar (Level, Slope) | -0.05 (0.02) .02 | 0.05 (0.02) <.01 | -0.00 (0.03) .92 | 0.01 (0.02) .58 | --- |
|  | Correlation of Levels | 0.119 | 0.175 | 0.149 | 0.257 | 0.18(0.06) |
|  | Correlation of Slopes | NaN | Inf | NaN | NaN | Inf(NA) |
|  | Correlation of Residuals | 0.069 | 0.021 | 0.067 | 0.022 | 0.04(0.03) |
|  | N | 370 | 370 | 370 | 370 | 370.00(0.00) |
|  | occasions | 5 | 5 | 5 | 5 | 5.00(0.00) |
|  | parameters | 41 | 41 | 41 | 41 | 41.00(0.00) |
|  | LL | -3,172 | -2,195 | -2,834 | -2,513 | -2,678(420) |
|  | AIC | 6,426 | 4,471 | 5,749 | 5,108 | 5,439(840) |
|  | BIC | 6,586 | 4,632 | 5,910 | 5,269 | 5,599(840) |

## serial7

Gender = *female*; Process (a) = *gait*; Process (b) = *serial7*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| process | label | a | aeh | aehplus |
| ab | Covar (Levels) | 0.06 (0.22) .79 | 0.03 (0.20) .88 | 0.02 (0.02) .20 |
| ab | Covar (Slopes) | 0.00 (0.00) .91 | 0.00 (0.00) .94 | 0.00 (0.00) .60 |
| ab | Covar (Residuals) | 0.03 (0.01) .07 | 0.02 (0.01) .17 | 0.01 (0.01) .18 |
| er | Corr (Levels) | --- | --- | --- |
| er | Corr (Slopes) | --- | --- | --- |
| er | Corr (Residuals) | --- | --- | --- |
| a | Level | 0.84 (0.02) <.01 | 0.76 (0.02) <.01 | 0.79 (0.02) <.01 |
| a | Slope | -0.02 (0.01) <.01 | -0.03 (0.01) <.01 | -0.03 (0.00) <.01 |
| a | Level \* age | -0.01 (0.00) <.01 | -0.01 (0.00) <.01 | -0.01 (0.00) <.01 |
| a | Level \* education | --- | 0.01 (0.00) <.01 | 0.01 (0.00) <.01 |
| a | Level \* height | --- | 0.17 (0.20) .40 | 0.16 (0.19) .41 |
| a | Level \* smoking | --- | --- | -0.04 (0.04) .35 |
| a | Level \* cardio | --- | --- | -0.03 (0.02) .17 |
| a | Level \* diabetes | --- | --- | -0.06 (0.03) .02 |
| a | Slope \* age | -0.00 (0.00) .63 | -0.00 (0.00) .23 | -0.00 (0.00) <.01 |
| a | Slope \* education | --- | 0.00 (0.00) .13 | 0.00 (0.00) .11 |
| a | Slope \* height | --- | -0.03 (0.05) .60 | -0.03 (0.04) .47 |
| a | Slope \* smoking | --- | --- | -0.00 (0.01) .80 |
| a | Slope \* cardio | --- | --- | -0.00 (0.00) .88 |
| a | Slope \* diabetes | --- | --- | 0.00 (0.01) .99 |
| b | Level | 3.54 (0.12) <.01 | 2.33 (0.18) <.01 | 2.26 (0.19) <.01 |
| b | Slope | -0.12 (0.02) <.01 | -0.07 (0.03) .01 | -0.04 (0.03) .23 |
| b | Level \* age | -0.01 (0.01) .33 | -0.01 (0.01) .26 | -0.01 (0.01) .46 |
| b | Level \* education | --- | 0.22 (0.02) <.01 | 0.23 (0.02) <.01 |
| b | Level \* height | --- | 0.86 (1.25) .49 | 1.06 (1.26) .40 |
| b | Level \* smoking | --- | --- | 0.64 (0.36) .08 |
| b | Level \* cardio | --- | --- | -0.14 (0.17) .42 |
| b | Level \* diabetes | --- | --- | 0.26 (0.18) .15 |
| b | Slope \* age | -0.01 (0.00) <.01 | -0.01 (0.00) <.01 | -0.01 (0.00) <.01 |
| b | Slope \* education | --- | -0.01 (0.00) .04 | -0.01 (0.00) .02 |
| b | Slope \* height | --- | 0.17 (0.18) .33 | 0.17 (0.18) .34 |
| b | Slope \* smoking | --- | --- | -0.15 (0.08) .08 |
| b | Slope \* cardio | --- | --- | -0.04 (0.03) .16 |
| b | Slope \* diabetes | --- | --- | -0.06 (0.04) .12 |
| a | Var (Level) | 0.00 (0.01) .61 | 0.00 (0.01) .70 | 0.02 (0.00) <.01 |
| a | Var (Slope) | 0.00 (0.00) .94 | 0.00 (0.00) .94 | 0.00 (0.00) .50 |
| a | Var (Residual) | 0.72 (0.03) <.01 | 0.72 (0.03) <.01 | 0.03 (0.00) <.01 |
| b | Var (Level) | 2.23 (0.17) <.01 | 1.80 (0.15) <.01 | 1.42 (0.15) <.01 |
| b | Var (Slope) | 0.04 (0.00) <.01 | 0.04 (0.00) <.01 | 0.03 (0.00) <.01 |
| b | Var (Residual) | 0.72 (0.03) <.01 | 0.72 (0.03) <.01 | 1.31 (0.07) <.01 |
| a | Covar (Level, Slope) | 0.00 (0.00) .95 | 0.00 (0.00) .82 | -0.00 (0.00) .49 |
| b | Covar (Level, Slope) | -0.12 (0.02) <.01 | -0.11 (0.02) <.01 | -0.05 (0.02) .02 |
|  | Correlation of Levels | 0.624 | 0.422 | 0.119 |
|  | Correlation of Slopes | Inf | NaN | NaN |
|  | Correlation of Residuals | 0.037 | 0.026 | 0.069 |
|  | N | 370 | 370 | 370 |
|  | occasions | 5 | 5 | 5 |
|  | parameters | 20 | 28 | 41 |
|  | LL | -4,272 | -4,235 | -3,172 |
|  | AIC | 8,585 | 8,526 | 6,426 |
|  | BIC | 8,663 | 8,635 | 6,586 |

## tics

Gender = *female*; Process (a) = *gait*; Process (b) = *tics*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| process | label | a | aeh | aehplus |
| ab | Covar (Levels) | 0.02 (0.05) .62 | 0.01 (0.05) .80 | 0.01 (0.01) .14 |
| ab | Covar (Slopes) | 0.00 (0.00) .11 | 0.00 (0.00) .17 | 0.00 (0.00) .13 |
| ab | Covar (Residuals) | 0.01 (0.01) .10 | 0.01 (0.01) .28 | 0.00 (0.01) .70 |
| er | Corr (Levels) | --- | --- | --- |
| er | Corr (Slopes) | --- | --- | --- |
| er | Corr (Residuals) | --- | --- | --- |
| a | Level | 0.84 (0.02) <.01 | 0.76 (0.02) <.01 | 0.79 (0.02) <.01 |
| a | Slope | -0.02 (0.00) <.01 | -0.03 (0.00) <.01 | -0.03 (0.00) <.01 |
| a | Level \* age | -0.01 (0.00) <.01 | -0.01 (0.00) <.01 | -0.01 (0.00) <.01 |
| a | Level \* education | --- | 0.01 (0.00) <.01 | 0.01 (0.00) <.01 |
| a | Level \* height | --- | 0.18 (0.19) .35 | 0.16 (0.19) .38 |
| a | Level \* smoking | --- | --- | -0.04 (0.04) .28 |
| a | Level \* cardio | --- | --- | -0.03 (0.02) .16 |
| a | Level \* diabetes | --- | --- | -0.06 (0.03) .02 |
| a | Slope \* age | -0.00 (0.00) .01 | -0.00 (0.00) .01 | -0.00 (0.00) <.01 |
| a | Slope \* education | --- | 0.00 (0.00) .04 | 0.00 (0.00) .03 |
| a | Slope \* height | --- | -0.04 (0.05) .43 | -0.04 (0.04) .40 |
| a | Slope \* smoking | --- | --- | 0.00 (0.01) .68 |
| a | Slope \* cardio | --- | --- | 0.00 (0.00) .99 |
| a | Slope \* diabetes | --- | --- | 0.00 (0.01) .85 |
| b | Level | 9.66 (0.06) <.01 | 9.02 (0.13) <.01 | 9.00 (0.14) <.01 |
| b | Slope | -0.07 (0.01) <.01 | -0.07 (0.02) <.01 | -0.07 (0.02) .01 |
| b | Level \* age | -0.03 (0.01) <.01 | -0.03 (0.01) <.01 | -0.03 (0.01) <.01 |
| b | Level \* education | --- | 0.12 (0.02) <.01 | 0.12 (0.02) <.01 |
| b | Level \* height | --- | 0.27 (0.84) .75 | 0.26 (0.85) .76 |
| b | Level \* smoking | --- | --- | -0.17 (0.24) .48 |
| b | Level \* cardio | --- | --- | -0.00 (0.11) .97 |
| b | Level \* diabetes | --- | --- | 0.06 (0.11) .57 |
| b | Slope \* age | -0.01 (0.00) <.01 | -0.01 (0.00) <.01 | -0.01 (0.00) <.01 |
| b | Slope \* education | --- | 0.00 (0.00) .94 | -0.00 (0.00) .83 |
| b | Slope \* height | --- | 0.04 (0.21) .86 | 0.07 (0.19) .70 |
| b | Slope \* smoking | --- | --- | 0.08 (0.06) .14 |
| b | Slope \* cardio | --- | --- | -0.01 (0.02) .71 |
| b | Slope \* diabetes | --- | --- | 0.00 (0.03) .93 |
| a | Var (Level) | 0.00 (0.00) .76 | 0.00 (0.00) .86 | 0.02 (0.00) <.01 |
| a | Var (Slope) | 0.00 (0.00) .84 | 0.00 (0.00) .88 | 0.00 (0.00) .31 |
| a | Var (Residual) | 0.36 (0.02) <.01 | 0.36 (0.02) <.01 | 0.03 (0.00) <.01 |
| b | Var (Level) | 0.65 (0.12) <.01 | 0.53 (0.10) <.01 | 0.29 (0.10) <.01 |
| b | Var (Slope) | 0.04 (0.01) <.01 | 0.04 (0.01) <.01 | 0.02 (0.01) .01 |
| b | Var (Residual) | 0.36 (0.02) <.01 | 0.36 (0.02) <.01 | 0.75 (0.06) <.01 |
| a | Covar (Level, Slope) | 0.00 (0.00) .92 | 0.00 (0.00) .96 | -0.00 (0.00) .32 |
| b | Covar (Level, Slope) | 0.01 (0.02) .62 | 0.01 (0.01) .61 | 0.05 (0.02) <.01 |
|  | Correlation of Levels | 0.978 | 0.521 | 0.175 |
|  | Correlation of Slopes | Inf | Inf | Inf |
|  | Correlation of Residuals | 0.036 | 0.025 | 0.021 |
|  | N | 370 | 370 | 370 |
|  | occasions | 5 | 5 | 5 |
|  | parameters | 20 | 28 | 41 |
|  | LL | -2,990 | -2,959 | -2,195 |
|  | AIC | 6,019 | 5,975 | 4,471 |
|  | BIC | 6,098 | 6,084 | 4,632 |

## word\_de

Gender = *female*; Process (a) = *gait*; Process (b) = *word\_de*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| process | label | a | aeh | aehplus |
| ab | Covar (Levels) | 0.05 (1.64) .98 | 0.03 (0.22) .88 | 0.03 (0.02) .17 |
| ab | Covar (Slopes) | 0.00 (0.08) .99 | 0.00 (0.01) .94 | 0.00 (0.00) .53 |
| ab | Covar (Residuals) | 0.02 (0.09) .77 | 0.02 (0.01) .11 | 0.01 (0.01) .15 |
| er | Corr (Levels) | --- | --- | --- |
| er | Corr (Slopes) | --- | --- | --- |
| er | Corr (Residuals) | --- | --- | --- |
| a | Level | 0.84 (0.04) <.01 | 0.76 (0.02) <.01 | 0.79 (0.02) <.01 |
| a | Slope | -0.02 (0.04) .64 | -0.03 (0.00) <.01 | -0.03 (0.00) <.01 |
| a | Level \* age | -0.01 (0.00) .02 | -0.01 (0.00) <.01 | -0.01 (0.00) <.01 |
| a | Level \* education | --- | 0.01 (0.00) <.01 | 0.01 (0.00) <.01 |
| a | Level \* height | --- | 0.17 (0.20) .38 | 0.16 (0.19) .38 |
| a | Level \* smoking | --- | --- | -0.04 (0.04) .28 |
| a | Level \* cardio | --- | --- | -0.04 (0.02) .15 |
| a | Level \* diabetes | --- | --- | -0.06 (0.03) .02 |
| a | Slope \* age | -0.00 (0.00) .88 | -0.00 (0.00) .14 | -0.00 (0.00) <.01 |
| a | Slope \* education | --- | 0.00 (0.00) .46 | 0.00 (0.00) .06 |
| a | Slope \* height | --- | -0.04 (0.05) .50 | -0.04 (0.04) .38 |
| a | Slope \* smoking | --- | --- | 0.00 (0.01) .71 |
| a | Slope \* cardio | --- | --- | 0.00 (0.00) .84 |
| a | Slope \* diabetes | --- | --- | 0.00 (0.01) .99 |
| b | Level | 4.56 (0.11) <.01 | 3.79 (0.18) <.01 | 3.94 (0.19) <.01 |
| b | Slope | -0.08 (0.02) <.01 | -0.03 (0.03) .34 | -0.00 (0.03) .87 |
| b | Level \* age | -0.09 (0.01) <.01 | -0.09 (0.01) <.01 | -0.09 (0.01) <.01 |
| b | Level \* education | --- | 0.14 (0.03) <.01 | 0.14 (0.03) <.01 |
| b | Level \* height | --- | -0.09 (1.25) .94 | -0.23 (1.25) .86 |
| b | Level \* smoking | --- | --- | 0.59 (0.49) .23 |
| b | Level \* cardio | --- | --- | -0.24 (0.19) .20 |
| b | Level \* diabetes | --- | --- | -0.38 (0.21) .07 |
| b | Slope \* age | -0.01 (0.00) <.01 | -0.01 (0.00) <.01 | -0.01 (0.00) <.01 |
| b | Slope \* education | --- | -0.01 (0.00) .07 | -0.01 (0.00) .03 |
| b | Slope \* height | --- | 0.10 (0.18) .60 | 0.13 (0.18) .47 |
| b | Slope \* smoking | --- | --- | -0.24 (0.07) <.01 |
| b | Slope \* cardio | --- | --- | -0.02 (0.03) .64 |
| b | Slope \* diabetes | --- | --- | -0.01 (0.04) .84 |
| a | Var (Level) | 0.00 (0.07) .98 | 0.00 (0.01) .90 | 0.02 (0.00) <.01 |
| a | Var (Slope) | 0.00 (0.00) .95 | 0.00 (0.00) .95 | 0.00 (0.00) .46 |
| a | Var (Residual) | 0.89 (0.05) <.01 | 0.89 (0.05) <.01 | 0.03 (0.00) <.01 |
| b | Var (Level) | 2.20 (0.24) <.01 | 2.02 (0.22) <.01 | 1.36 (0.24) <.01 |
| b | Var (Slope) | 0.04 (0.01) <.01 | 0.04 (0.01) <.01 | 0.01 (0.01) .24 |
| b | Var (Residual) | 0.89 (0.05) <.01 | 0.89 (0.05) <.01 | 1.84 (0.12) <.01 |
| a | Covar (Level, Slope) | 0.00 (0.02) .99 | 0.00 (0.00) .92 | -0.00 (0.00) .41 |
| b | Covar (Level, Slope) | -0.12 (0.03) <.01 | -0.11 (0.03) <.01 | -0.00 (0.03) .92 |
|  | Correlation of Levels | 0.724 | 0.733 | 0.149 |
|  | Correlation of Slopes | Inf | Inf | NaN |
|  | Correlation of Residuals | 0.028 | 0.025 | 0.067 |
|  | N | 370 | 370 | 370 |
|  | occasions | 5 | 5 | 5 |
|  | parameters | 20 | 28 | 41 |
|  | LL | -4,029 | -4,015 | -2,834 |
|  | AIC | 8,097 | 8,087 | 5,749 |
|  | BIC | 8,176 | 8,196 | 5,910 |

## word\_im

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

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| process | label | a | aeh | aehplus |
| ab | Covar (Levels) | 0.05 (0.05) .34 | 0.03 (0.07) .64 | 0.04 (0.01) .01 |
| ab | Covar (Slopes) | 0.00 (0.01) .94 | 0.00 (0.01) .93 | 0.00 (0.00) .44 |
| ab | Covar (Residuals) | 0.01 (0.01) .19 | 0.01 (0.01) .27 | 0.00 (0.01) .60 |
| er | Corr (Levels) | --- | --- | --- |
| er | Corr (Slopes) | --- | --- | --- |
| er | Corr (Residuals) | --- | --- | --- |
| a | Level | 0.84 (0.02) <.01 | 0.76 (0.02) <.01 | 0.79 (0.02) <.01 |
| a | Slope | -0.02 (0.00) <.01 | -0.03 (0.01) <.01 | -0.03 (0.00) <.01 |
| a | Level \* age | -0.01 (0.00) <.01 | -0.01 (0.00) <.01 | -0.01 (0.00) <.01 |
| a | Level \* education | --- | 0.01 (0.00) <.01 | 0.01 (0.00) <.01 |
| a | Level \* height | --- | 0.18 (0.22) .42 | 0.17 (0.19) .38 |
| a | Level \* smoking | --- | --- | -0.04 (0.04) .29 |
| a | Level \* cardio | --- | --- | -0.03 (0.02) .15 |
| a | Level \* diabetes | --- | --- | -0.06 (0.03) .02 |
| a | Slope \* age | -0.00 (0.00) .53 | -0.00 (0.00) .36 | -0.00 (0.00) <.01 |
| a | Slope \* education | --- | 0.00 (0.00) .08 | 0.00 (0.00) .06 |
| a | Slope \* height | --- | -0.04 (0.06) .54 | -0.04 (0.04) .37 |
| a | Slope \* smoking | --- | --- | 0.00 (0.01) .79 |
| a | Slope \* cardio | --- | --- | 0.00 (0.00) .90 |
| a | Slope \* diabetes | --- | --- | 0.00 (0.01) .99 |
| b | Level | 5.67 (0.09) <.01 | 5.01 (0.14) <.01 | 5.12 (0.16) <.01 |
| b | Slope | -0.09 (0.01) <.01 | -0.07 (0.02) <.01 | -0.06 (0.03) .03 |
| b | Level \* age | -0.06 (0.01) <.01 | -0.07 (0.01) <.01 | -0.06 (0.01) <.01 |
| b | Level \* education | --- | 0.12 (0.02) <.01 | 0.12 (0.02) <.01 |
| b | Level \* height | --- | 0.22 (0.96) .82 | 0.08 (0.98) .94 |
| b | Level \* smoking | --- | --- | 0.40 (0.26) .12 |
| b | Level \* cardio | --- | --- | -0.21 (0.14) .14 |
| b | Level \* diabetes | --- | --- | -0.24 (0.16) .15 |
| b | Slope \* age | -0.01 (0.00) <.01 | -0.01 (0.00) <.01 | -0.01 (0.00) <.01 |
| b | Slope \* education | --- | -0.00 (0.00) .56 | -0.00 (0.00) .45 |
| b | Slope \* height | --- | 0.14 (0.15) .33 | 0.22 (0.14) .11 |
| b | Slope \* smoking | --- | --- | -0.20 (0.06) <.01 |
| b | Slope \* cardio | --- | --- | -0.01 (0.02) .66 |
| b | Slope \* diabetes | --- | --- | 0.01 (0.03) .75 |
| a | Var (Level) | 0.00 (0.01) .66 | 0.00 (0.01) .79 | 0.02 (0.00) <.01 |
| a | Var (Slope) | 0.00 (0.00) .94 | 0.00 (0.00) .95 | 0.00 (0.00) .32 |
| a | Var (Residual) | 0.64 (0.03) <.01 | 0.64 (0.03) <.01 | 0.03 (0.00) <.01 |
| b | Var (Level) | 1.28 (0.14) <.01 | 1.16 (0.14) <.01 | 0.78 (0.15) <.01 |
| b | Var (Slope) | 0.02 (0.00) <.01 | 0.02 (0.00) <.01 | 0.00 (0.00) .60 |
| b | Var (Residual) | 0.64 (0.03) <.01 | 0.64 (0.03) <.01 | 1.25 (0.07) <.01 |
| a | Covar (Level, Slope) | 0.00 (0.00) .97 | 0.00 (0.00) .94 | -0.00 (0.00) .28 |
| b | Covar (Level, Slope) | -0.05 (0.02) .01 | -0.05 (0.02) .01 | 0.01 (0.02) .58 |
|  | Correlation of Levels | 0.947 | 0.706 | 0.257 |
|  | Correlation of Slopes | Inf | Inf | NaN |
|  | Correlation of Residuals | 0.022 | 0.017 | 0.022 |
|  | N | 370 | 370 | 370 |
|  | occasions | 5 | 5 | 5 |
|  | parameters | 20 | 28 | 41 |
|  | LL | -3,551 | -3,532 | -2,513 |
|  | AIC | 7,142 | 7,120 | 5,108 |
|  | BIC | 7,221 | 7,230 | 5,269 |

## Summary

Study = *HRS*; Gender = *female*; Process (a) = *gait*

Computed correlations:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| label | process\_b | a | aeh | aehplus |
| Correlation of Levels | serial7 | 0.62 | 0.42 | 0.12 |
| Correlation of Levels | tics | 0.98 | 0.52 | 0.18 |
| Correlation of Levels | word\_de | 0.72 | 0.73 | 0.15 |
| Correlation of Levels | word\_im | 0.95 | 0.71 | 0.26 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| label | process\_b | a | aeh | aehplus |
| Correlation of Slopes | serial7 | Inf | NaN | NaN |
| Correlation of Slopes | tics | Inf | Inf | Inf |
| Correlation of Slopes | word\_de | Inf | Inf | NaN |
| Correlation of Slopes | word\_im | Inf | Inf | NaN |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| label | process\_b | a | aeh | aehplus |
| Correlation of Residuals | serial7 | 0.04 | 0.03 | 0.07 |
| Correlation of Residuals | tics | 0.04 | 0.02 | 0.02 |
| Correlation of Residuals | word\_de | 0.03 | 0.02 | 0.07 |
| Correlation of Residuals | word\_im | 0.02 | 0.02 | 0.02 |

P-values for corresponding covariances:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| label | process\_b | a | aeh | aehplus |
| Covariance of Levels | serial7 | 0.79 | 0.88 | 0.20 |
| Covariance of Levels | tics | 0.62 | 0.80 | 0.14 |
| Covariance of Levels | word\_de | 0.98 | 0.88 | 0.17 |
| Covariance of Levels | word\_im | 0.34 | 0.64 | 0.01 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| label | process\_b | a | aeh | aehplus |
| Covariance of Slopes | serial7 | 0.91 | 0.94 | 0.60 |
| Covariance of Slopes | tics | 0.11 | 0.17 | 0.13 |
| Covariance of Slopes | word\_de | 0.99 | 0.94 | 0.53 |
| Covariance of Slopes | word\_im | 0.94 | 0.93 | 0.44 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| label | process\_b | a | aeh | aehplus |
| Covariance of Residuals | serial7 | 0.07 | 0.17 | 0.18 |
| Covariance of Residuals | tics | 0.10 | 0.28 | 0.70 |
| Covariance of Residuals | word\_de | 0.77 | 0.11 | 0.15 |
| Covariance of Residuals | word\_im | 0.19 | 0.27 | 0.60 |

# male

Gender = *male*; Model type: *aehplus*; Process (a) = *gait*; Process (b): *serial7*, *tics*, *word\_de*, *word\_im*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| process | label | serial7 | tics | word\_de | word\_im | mean(sd) |
| ab | Covar (Levels) | 0.05 (0.02) <.01 | 0.02 (0.01) .03 | 0.01 (0.02) .65 | 0.03 (0.02) .03 | --- |
| ab | Covar (Slopes) | 0.00 (0.00) .01 | 0.00 (0.00) .60 | 0.00 (0.00) .96 | 0.00 (0.00) .74 | --- |
| ab | Covar (Residuals) | 0.00 (0.01) .98 | -0.00 (0.01) .76 | 0.00 (0.01) .60 | 0.00 (0.01) .82 | --- |
| er | Corr (Levels) | --- | --- | --- | --- | --- |
| er | Corr (Slopes) | --- | --- | --- | --- | --- |
| er | Corr (Residuals) | --- | --- | --- | --- | --- |
| a | Level | 0.86 (0.04) <.01 | 0.86 (0.04) <.01 | 0.86 (0.04) <.01 | 0.86 (0.04) <.01 | 0.86(0.00) |
| a | Slope | -0.03 (0.01) .01 | -0.02 (0.01) .02 | -0.02 (0.01) .03 | -0.02 (0.01) .03 | -0.02(0.00) |
| a | Level \* age | -0.01 (0.00) <.01 | -0.01 (0.00) <.01 | -0.01 (0.00) <.01 | -0.01 (0.00) <.01 | -0.01(0.00) |
| a | Level \* education | 0.01 (0.00) .03 | 0.01 (0.00) .03 | 0.01 (0.00) .03 | 0.01 (0.00) .03 | 0.01(0.00) |
| a | Level \* height | 0.11 (0.15) .46 | 0.12 (0.15) .45 | 0.12 (0.15) .45 | 0.12 (0.15) .45 | 0.12(0.00) |
| a | Level \* smoking | -0.06 (0.05) .21 | -0.07 (0.05) .16 | -0.06 (0.05) .19 | -0.06 (0.05) .18 | -0.06(0.00) |
| a | Level \* cardio | -0.01 (0.02) .54 | -0.01 (0.02) .55 | -0.01 (0.02) .55 | -0.01 (0.02) .56 | -0.01(0.00) |
| a | Level \* diabetes | -0.07 (0.03) .02 | -0.07 (0.03) .02 | -0.07 (0.03) .02 | -0.07 (0.03) .02 | -0.07(0.00) |
| a | Slope \* age | -0.00 (0.00) .05 | -0.00 (0.00) .12 | -0.00 (0.00) .09 | -0.00 (0.00) .14 | -0.00(0.00) |
| a | Slope \* education | 0.00 (0.00) .15 | 0.00 (0.00) .11 | 0.00 (0.00) .20 | 0.00 (0.00) .15 | 0.00(0.00) |
| a | Slope \* height | -0.01 (0.05) .75 | -0.02 (0.04) .68 | -0.01 (0.04) .73 | -0.02 (0.05) .71 | -0.02(0.00) |
| a | Slope \* smoking | 0.02 (0.01) .10 | 0.03 (0.01) .01 | 0.02 (0.01) .05 | 0.02 (0.01) .03 | 0.02(0.00) |
| a | Slope \* cardio | -0.00 (0.01) .68 | -0.00 (0.01) .63 | -0.00 (0.01) .63 | -0.00 (0.01) .57 | -0.00(0.00) |
| a | Slope \* diabetes | -0.01 (0.01) .20 | -0.01 (0.01) .22 | -0.01 (0.01) .23 | -0.01 (0.01) .22 | -0.01(0.00) |
| b | Level | 3.14 (0.28) <.01 | 9.33 (0.15) <.01 | 3.38 (0.26) <.01 | 4.44 (0.21) <.01 | --- |
| b | Slope | -0.11 (0.05) .02 | -0.12 (0.03) <.01 | -0.10 (0.04) .01 | -0.07 (0.04) .09 | --- |
| b | Level \* age | 0.01 (0.01) .32 | -0.01 (0.01) .21 | -0.07 (0.01) <.01 | -0.07 (0.01) <.01 | --- |
| b | Level \* education | 0.15 (0.03) <.01 | 0.06 (0.01) <.01 | 0.15 (0.02) <.01 | 0.12 (0.02) <.01 | --- |
| b | Level \* height | 0.73 (1.11) .51 | -0.09 (0.69) .89 | 1.12 (0.98) .25 | 1.55 (0.92) .09 | --- |
| b | Level \* smoking | 0.62 (0.27) .02 | -0.16 (0.15) .29 | -0.10 (0.31) .76 | -0.49 (0.24) .04 | --- |
| b | Level \* cardio | -0.15 (0.16) .34 | 0.01 (0.08) .90 | -0.20 (0.16) .21 | 0.03 (0.14) .84 | --- |
| b | Level \* diabetes | 0.08 (0.20) .70 | -0.10 (0.10) .32 | -0.44 (0.22) .04 | -0.28 (0.19) .13 | --- |
| b | Slope \* age | -0.01 (0.00) <.01 | -0.01 (0.00) <.01 | -0.01 (0.00) <.01 | -0.01 (0.00) <.01 | --- |
| b | Slope \* education | -0.00 (0.00) .25 | 0.01 (0.00) .04 | -0.00 (0.00) .63 | 0.00 (0.00) .97 | --- |
| b | Slope \* height | 0.15 (0.21) .49 | 0.04 (0.16) .80 | 0.05 (0.20) .82 | -0.10 (0.18) .57 | --- |
| b | Slope \* smoking | -0.23 (0.07) <.01 | 0.04 (0.05) .49 | 0.01 (0.08) .85 | 0.07 (0.05) .18 | --- |
| b | Slope \* cardio | -0.01 (0.03) .85 | -0.04 (0.02) .11 | 0.01 (0.03) .82 | -0.04 (0.03) .13 | --- |
| b | Slope \* diabetes | -0.07 (0.04) .06 | -0.01 (0.03) .72 | 0.04 (0.04) .22 | -0.00 (0.04) .94 | --- |
| a | Var (Level) | 0.02 (0.00) <.01 | 0.02 (0.00) <.01 | 0.02 (0.00) <.01 | 0.02 (0.00) <.01 | 0.02(0.00) |
| a | Var (Slope) | 0.00 (0.00) .02 | 0.00 (0.00) .05 | 0.00 (0.00) .04 | 0.00 (0.00) .05 | 0.00(0.00) |
| a | Var (Residual) | 0.03 (0.00) <.01 | 0.03 (0.00) <.01 | 0.03 (0.00) <.01 | 0.03 (0.00) <.01 | 0.03(0.00) |
| b | Var (Level) | 0.95 (0.16) <.01 | 0.10 (0.07) .13 | 1.07 (0.19) <.01 | 0.69 (0.12) <.01 | --- |
| b | Var (Slope) | 0.04 (0.00) <.01 | 0.01 (0.00) <.01 | 0.00 (0.01) .82 | 0.00 (0.00) .42 | --- |
| b | Var (Residual) | 1.29 (0.07) <.01 | 0.64 (0.05) <.01 | 1.46 (0.08) <.01 | 1.17 (0.07) <.01 | --- |
| a | Covar (Level, Slope) | -0.00 (0.00) .16 | -0.00 (0.00) .18 | -0.00 (0.00) .14 | -0.00 (0.00) .16 | -0.00(0.00) |
| b | Covar (Level, Slope) | -0.03 (0.02) .16 | 0.03 (0.01) .04 | 0.00 (0.03) .86 | -0.01 (0.02) .61 | --- |
|  | Correlation of Levels | 0.31 | 0.413 | 0.051 | 0.270 | 0.26(0.15) |
|  | Correlation of Slopes | 0.48 | 0.000 | 0.000 | 0.000 | 0.12(0.24) |
|  | Correlation of Residuals | 0.00 | -0.015 | 0.025 | 0.011 | 0.01(0.02) |
|  | N | 318 | 318 | 318 | 318 | 318.00(0.00) |
|  | occasions | 5 | 5 | 5 | 5 | 5.00(0.00) |
|  | parameters | 41 | 41 | 41 | 41 | 41.00(0.00) |
|  | LL | -2,735 | -1,692 | -2,215 | -2,050 | -2,173(434) |
|  | AIC | 5,552 | 3,465 | 4,512 | 4,182 | 4,428(867) |
|  | BIC | 5,706 | 3,620 | 4,666 | 4,336 | 4,582(867) |

## serial7

Gender = *male*; Process (a) = *gait*; Process (b) = *serial7*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| process | label | a | aeh | aehplus |
| ab | Covar (Levels) | 0.06 (0.18) .74 | 0.04 (0.18) .82 | 0.05 (0.02) <.01 |
| ab | Covar (Slopes) | 0.00 (0.00) .48 | 0.00 (0.00) .56 | 0.00 (0.00) .01 |
| ab | Covar (Residuals) | 0.06 (0.02) .02 | 0.04 (0.03) .09 | 0.00 (0.01) .98 |
| er | Corr (Levels) | --- | --- | --- |
| er | Corr (Slopes) | --- | --- | --- |
| er | Corr (Residuals) | --- | --- | --- |
| a | Level | 0.92 (0.02) <.01 | 0.84 (0.04) <.01 | 0.86 (0.04) <.01 |
| a | Slope | -0.03 (0.00) <.01 | -0.03 (0.01) .01 | -0.03 (0.01) .01 |
| a | Level \* age | -0.01 (0.00) <.01 | -0.01 (0.00) <.01 | -0.01 (0.00) <.01 |
| a | Level \* education | --- | 0.01 (0.00) .03 | 0.01 (0.00) .03 |
| a | Level \* height | --- | 0.16 (0.16) .30 | 0.11 (0.15) .46 |
| a | Level \* smoking | --- | --- | -0.06 (0.05) .21 |
| a | Level \* cardio | --- | --- | -0.01 (0.02) .54 |
| a | Level \* diabetes | --- | --- | -0.07 (0.03) .02 |
| a | Slope \* age | -0.00 (0.00) .06 | -0.00 (0.00) .09 | -0.00 (0.00) .05 |
| a | Slope \* education | --- | 0.00 (0.00) .26 | 0.00 (0.00) .15 |
| a | Slope \* height | --- | -0.03 (0.05) .56 | -0.01 (0.05) .75 |
| a | Slope \* smoking | --- | --- | 0.02 (0.01) .10 |
| a | Slope \* cardio | --- | --- | -0.00 (0.01) .68 |
| a | Slope \* diabetes | --- | --- | -0.01 (0.01) .20 |
| b | Level | 4.13 (0.09) <.01 | 3.16 (0.27) <.01 | 3.14 (0.28) <.01 |
| b | Slope | -0.14 (0.02) <.01 | -0.15 (0.05) <.01 | -0.11 (0.05) .02 |
| b | Level \* age | 0.00 (0.01) .74 | 0.01 (0.01) .42 | 0.01 (0.01) .32 |
| b | Level \* education | --- | 0.15 (0.03) <.01 | 0.15 (0.03) <.01 |
| b | Level \* height | --- | 0.67 (1.09) .54 | 0.73 (1.11) .51 |
| b | Level \* smoking | --- | --- | 0.62 (0.27) .02 |
| b | Level \* cardio | --- | --- | -0.15 (0.16) .34 |
| b | Level \* diabetes | --- | --- | 0.08 (0.20) .70 |
| b | Slope \* age | -0.01 (0.00) <.01 | -0.01 (0.00) <.01 | -0.01 (0.00) <.01 |
| b | Slope \* education | --- | -0.00 (0.00) .30 | -0.00 (0.00) .25 |
| b | Slope \* height | --- | 0.19 (0.21) .38 | 0.15 (0.21) .49 |
| b | Slope \* smoking | --- | --- | -0.23 (0.07) <.01 |
| b | Slope \* cardio | --- | --- | -0.01 (0.03) .85 |
| b | Slope \* diabetes | --- | --- | -0.07 (0.04) .06 |
| a | Var (Level) | 0.00 (0.01) .81 | 0.00 (0.01) .85 | 0.02 (0.00) <.01 |
| a | Var (Slope) | 0.00 (0.00) .81 | 0.00 (0.00) .84 | 0.00 (0.00) .02 |
| a | Var (Residual) | 0.71 (0.03) <.01 | 0.71 (0.03) <.01 | 0.03 (0.00) <.01 |
| b | Var (Level) | 1.59 (0.19) <.01 | 1.32 (0.16) <.01 | 0.95 (0.16) <.01 |
| b | Var (Slope) | 0.06 (0.00) <.01 | 0.06 (0.00) <.01 | 0.04 (0.00) <.01 |
| b | Var (Residual) | 0.71 (0.03) <.01 | 0.71 (0.03) <.01 | 1.29 (0.07) <.01 |
| a | Covar (Level, Slope) | 0.00 (0.00) .99 | 0.00 (0.00) .97 | -0.00 (0.00) .16 |
| b | Covar (Level, Slope) | -0.10 (0.02) <.01 | -0.09 (0.02) <.01 | -0.03 (0.02) .16 |
|  | Correlation of Levels | 0.840 | 0.798 | 0.31 |
|  | Correlation of Slopes | Inf | Inf | 0.48 |
|  | Correlation of Residuals | 0.077 | 0.062 | 0.00 |
|  | N | 318 | 318 | 318 |
|  | occasions | 5 | 5 | 5 |
|  | parameters | 20 | 28 | 41 |
|  | LL | -3,641 | -3,614 | -2,735 |
|  | AIC | 7,322 | 7,285 | 5,552 |
|  | BIC | 7,397 | 7,390 | 5,706 |

## tics

Gender = *male*; Process (a) = *gait*; Process (b) = *tics*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| process | label | a | aeh | aehplus |
| ab | Covar (Levels) | 0.02 (0.05) .67 | 0.01 (0.04) .75 | 0.02 (0.01) .03 |
| ab | Covar (Slopes) | 0.00 (0.00) .78 | 0.00 (0.00) .85 | 0.00 (0.00) .60 |
| ab | Covar (Residuals) | 0.01 (0.01) .10 | 0.01 (0.01) .17 | -0.00 (0.01) .76 |
| er | Corr (Levels) | --- | --- | --- |
| er | Corr (Slopes) | --- | --- | --- |
| er | Corr (Residuals) | --- | --- | --- |
| a | Level | 0.91 (0.02) <.01 | 0.83 (0.04) <.01 | 0.86 (0.04) <.01 |
| a | Slope | -0.02 (0.00) <.01 | -0.02 (0.01) .03 | -0.02 (0.01) .02 |
| a | Level \* age | -0.01 (0.00) <.01 | -0.01 (0.00) <.01 | -0.01 (0.00) <.01 |
| a | Level \* education | --- | 0.01 (0.00) .03 | 0.01 (0.00) .03 |
| a | Level \* height | --- | 0.18 (0.15) .23 | 0.12 (0.15) .45 |
| a | Level \* smoking | --- | --- | -0.07 (0.05) .16 |
| a | Level \* cardio | --- | --- | -0.01 (0.02) .55 |
| a | Level \* diabetes | --- | --- | -0.07 (0.03) .02 |
| a | Slope \* age | 0.00 (0.00) .57 | 0.00 (0.00) .66 | -0.00 (0.00) .12 |
| a | Slope \* education | --- | 0.00 (0.00) .19 | 0.00 (0.00) .11 |
| a | Slope \* height | --- | -0.03 (0.05) .47 | -0.02 (0.04) .68 |
| a | Slope \* smoking | --- | --- | 0.03 (0.01) .01 |
| a | Slope \* cardio | --- | --- | -0.00 (0.01) .63 |
| a | Slope \* diabetes | --- | --- | -0.01 (0.01) .22 |
| b | Level | 9.63 (0.05) <.01 | 9.29 (0.16) <.01 | 9.33 (0.15) <.01 |
| b | Slope | -0.08 (0.01) <.01 | -0.12 (0.03) <.01 | -0.12 (0.03) <.01 |
| b | Level \* age | -0.01 (0.01) .18 | -0.01 (0.01) .19 | -0.01 (0.01) .21 |
| b | Level \* education | --- | 0.06 (0.01) <.01 | 0.06 (0.01) <.01 |
| b | Level \* height | --- | -0.01 (0.71) .99 | -0.09 (0.69) .89 |
| b | Level \* smoking | --- | --- | -0.16 (0.15) .29 |
| b | Level \* cardio | --- | --- | 0.01 (0.08) .90 |
| b | Level \* diabetes | --- | --- | -0.10 (0.10) .32 |
| b | Slope \* age | -0.01 (0.00) <.01 | -0.01 (0.00) <.01 | -0.01 (0.00) <.01 |
| b | Slope \* education | --- | 0.01 (0.00) .09 | 0.01 (0.00) .04 |
| b | Slope \* height | --- | 0.03 (0.16) .86 | 0.04 (0.16) .80 |
| b | Slope \* smoking | --- | --- | 0.04 (0.05) .49 |
| b | Slope \* cardio | --- | --- | -0.04 (0.02) .11 |
| b | Slope \* diabetes | --- | --- | -0.01 (0.03) .72 |
| a | Var (Level) | 0.00 (0.00) .76 | 0.00 (0.00) .81 | 0.02 (0.00) <.01 |
| a | Var (Slope) | 0.00 (0.00) .83 | 0.00 (0.00) .83 | 0.00 (0.00) .05 |
| a | Var (Residual) | 0.32 (0.02) <.01 | 0.32 (0.02) <.01 | 0.03 (0.00) <.01 |
| b | Var (Level) | 0.31 (0.06) <.01 | 0.27 (0.06) <.01 | 0.10 (0.07) .13 |
| b | Var (Slope) | 0.03 (0.00) <.01 | 0.03 (0.00) <.01 | 0.01 (0.00) <.01 |
| b | Var (Residual) | 0.32 (0.02) <.01 | 0.32 (0.02) <.01 | 0.64 (0.05) <.01 |
| a | Covar (Level, Slope) | 0.00 (0.00) .97 | 0.00 (0.00) .97 | -0.00 (0.00) .18 |
| b | Covar (Level, Slope) | 0.00 (0.01) .70 | 0.00 (0.01) .98 | 0.03 (0.01) .04 |
|  | Correlation of Levels | 0.803 | 0.86 | 0.413 |
|  | Correlation of Slopes | Inf | NaN | 0.000 |
|  | Correlation of Residuals | 0.046 | 0.04 | -0.015 |
|  | N | 318 | 318 | 318 |
|  | occasions | 5 | 5 | 5 |
|  | parameters | 20 | 28 | 41 |
|  | LL | -2,295 | -2,274 | -1,692 |
|  | AIC | 4,630 | 4,604 | 3,465 |
|  | BIC | 4,705 | 4,709 | 3,620 |

## word\_de

Gender = *male*; Process (a) = *gait*; Process (b) = *word\_de*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| process | label | a | aeh | aehplus |
| ab | Covar (Levels) | 0.03 (0.22) .88 | 0.02 (0.23) .94 | 0.01 (0.02) .65 |
| ab | Covar (Slopes) | 0.00 (0.01) .99 | 0.00 (0.02) .99 | 0.00 (0.00) .96 |
| ab | Covar (Residuals) | 0.01 (0.01) .51 | 0.01 (0.01) .62 | 0.00 (0.01) .60 |
| er | Corr (Levels) | --- | --- | --- |
| er | Corr (Slopes) | --- | --- | --- |
| er | Corr (Residuals) | --- | --- | --- |
| a | Level | 0.91 (0.02) <.01 | 0.83 (0.04) <.01 | 0.86 (0.04) <.01 |
| a | Slope | -0.02 (0.01) .01 | -0.02 (0.01) .08 | -0.02 (0.01) .03 |
| a | Level \* age | -0.01 (0.00) <.01 | -0.01 (0.00) <.01 | -0.01 (0.00) <.01 |
| a | Level \* education | --- | 0.01 (0.00) .02 | 0.01 (0.00) .03 |
| a | Level \* height | --- | 0.17 (0.15) .26 | 0.12 (0.15) .45 |
| a | Level \* smoking | --- | --- | -0.06 (0.05) .19 |
| a | Level \* cardio | --- | --- | -0.01 (0.02) .55 |
| a | Level \* diabetes | --- | --- | -0.07 (0.03) .02 |
| a | Slope \* age | 0.00 (0.00) .69 | 0.00 (0.00) .72 | -0.00 (0.00) .09 |
| a | Slope \* education | --- | 0.00 (0.00) .46 | 0.00 (0.00) .20 |
| a | Slope \* height | --- | -0.03 (0.06) .60 | -0.01 (0.04) .73 |
| a | Slope \* smoking | --- | --- | 0.02 (0.01) .05 |
| a | Slope \* cardio | --- | --- | -0.00 (0.01) .63 |
| a | Slope \* diabetes | --- | --- | -0.01 (0.01) .23 |
| b | Level | 4.25 (0.12) <.01 | 3.17 (0.25) <.01 | 3.38 (0.26) <.01 |
| b | Slope | -0.10 (0.02) <.01 | -0.09 (0.05) .04 | -0.10 (0.04) .01 |
| b | Level \* age | -0.08 (0.01) <.01 | -0.08 (0.01) <.01 | -0.07 (0.01) <.01 |
| b | Level \* education | --- | 0.15 (0.02) <.01 | 0.15 (0.02) <.01 |
| b | Level \* height | --- | 1.39 (0.99) .16 | 1.12 (0.98) .25 |
| b | Level \* smoking | --- | --- | -0.10 (0.31) .76 |
| b | Level \* cardio | --- | --- | -0.20 (0.16) .21 |
| b | Level \* diabetes | --- | --- | -0.44 (0.22) .04 |
| b | Slope \* age | -0.01 (0.00) <.01 | -0.01 (0.00) <.01 | -0.01 (0.00) <.01 |
| b | Slope \* education | --- | -0.00 (0.00) .50 | -0.00 (0.00) .63 |
| b | Slope \* height | --- | 0.06 (0.22) .78 | 0.05 (0.20) .82 |
| b | Slope \* smoking | --- | --- | 0.01 (0.08) .85 |
| b | Slope \* cardio | --- | --- | 0.01 (0.03) .82 |
| b | Slope \* diabetes | --- | --- | 0.04 (0.04) .22 |
| a | Var (Level) | 0.00 (0.01) .85 | 0.00 (0.01) .88 | 0.02 (0.00) <.01 |
| a | Var (Slope) | 0.00 (0.00) .92 | 0.00 (0.00) .93 | 0.00 (0.00) .04 |
| a | Var (Residual) | 0.73 (0.04) <.01 | 0.73 (0.04) <.01 | 0.03 (0.00) <.01 |
| b | Var (Level) | 1.79 (0.19) <.01 | 1.53 (0.17) <.01 | 1.07 (0.19) <.01 |
| b | Var (Slope) | 0.02 (0.00) <.01 | 0.02 (0.00) <.01 | 0.00 (0.01) .82 |
| b | Var (Residual) | 0.73 (0.04) <.01 | 0.73 (0.04) <.01 | 1.46 (0.08) <.01 |
| a | Covar (Level, Slope) | 0.00 (0.00) .98 | 0.00 (0.00) .99 | -0.00 (0.00) .14 |
| b | Covar (Level, Slope) | -0.06 (0.02) .01 | -0.06 (0.02) .01 | 0.00 (0.03) .86 |
|  | Correlation of Levels | 0.551 | 0.4349 | 0.051 |
|  | Correlation of Slopes | NaN | NaN | 0.000 |
|  | Correlation of Residuals | 0.012 | 0.0095 | 0.025 |
|  | N | 318 | 318 | 318 |
|  | occasions | 5 | 5 | 5 |
|  | parameters | 20 | 28 | 41 |
|  | LL | -3,141 | -3,117 | -2,215 |
|  | AIC | 6,322 | 6,290 | 4,512 |
|  | BIC | 6,398 | 6,395 | 4,666 |

## word\_im

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

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| process | label | a | aeh | aehplus |
| ab | Covar (Levels) | 0.05 (0.14) .74 | 0.03 (0.14) .82 | 0.03 (0.02) .03 |
| ab | Covar (Slopes) | 0.00 (0.01) .97 | 0.00 (0.01) .97 | 0.00 (0.00) .74 |
| ab | Covar (Residuals) | 0.01 (0.01) .30 | 0.01 (0.01) .39 | 0.00 (0.01) .82 |
| er | Corr (Levels) | --- | --- | --- |
| er | Corr (Slopes) | --- | --- | --- |
| er | Corr (Residuals) | --- | --- | --- |
| a | Level | 0.91 (0.02) <.01 | 0.83 (0.04) <.01 | 0.86 (0.04) <.01 |
| a | Slope | -0.02 (0.00) <.01 | -0.02 (0.01) .04 | -0.02 (0.01) .03 |
| a | Level \* age | -0.01 (0.00) <.01 | -0.01 (0.00) <.01 | -0.01 (0.00) <.01 |
| a | Level \* education | --- | 0.01 (0.00) .03 | 0.01 (0.00) .03 |
| a | Level \* height | --- | 0.18 (0.15) .25 | 0.12 (0.15) .45 |
| a | Level \* smoking | --- | --- | -0.06 (0.05) .18 |
| a | Level \* cardio | --- | --- | -0.01 (0.02) .56 |
| a | Level \* diabetes | --- | --- | -0.07 (0.03) .02 |
| a | Slope \* age | 0.00 (0.00) .75 | 0.00 (0.00) .78 | -0.00 (0.00) .14 |
| a | Slope \* education | --- | 0.00 (0.00) .25 | 0.00 (0.00) .15 |
| a | Slope \* height | --- | -0.03 (0.05) .49 | -0.02 (0.05) .71 |
| a | Slope \* smoking | --- | --- | 0.02 (0.01) .03 |
| a | Slope \* cardio | --- | --- | -0.00 (0.01) .57 |
| a | Slope \* diabetes | --- | --- | -0.01 (0.01) .22 |
| b | Level | 5.35 (0.10) <.01 | 4.32 (0.20) <.01 | 4.44 (0.21) <.01 |
| b | Slope | -0.11 (0.02) <.01 | -0.08 (0.04) .08 | -0.07 (0.04) .09 |
| b | Level \* age | -0.07 (0.01) <.01 | -0.06 (0.01) <.01 | -0.07 (0.01) <.01 |
| b | Level \* education | --- | 0.13 (0.02) <.01 | 0.12 (0.02) <.01 |
| b | Level \* height | --- | 1.81 (0.91) .05 | 1.55 (0.92) .09 |
| b | Level \* smoking | --- | --- | -0.49 (0.24) .04 |
| b | Level \* cardio | --- | --- | 0.03 (0.14) .84 |
| b | Level \* diabetes | --- | --- | -0.28 (0.19) .13 |
| b | Slope \* age | -0.01 (0.00) <.01 | -0.01 (0.00) <.01 | -0.01 (0.00) <.01 |
| b | Slope \* education | --- | -0.00 (0.00) .80 | 0.00 (0.00) .97 |
| b | Slope \* height | --- | -0.13 (0.18) .47 | -0.10 (0.18) .57 |
| b | Slope \* smoking | --- | --- | 0.07 (0.05) .18 |
| b | Slope \* cardio | --- | --- | -0.04 (0.03) .13 |
| b | Slope \* diabetes | --- | --- | -0.00 (0.04) .94 |
| a | Var (Level) | 0.00 (0.01) .81 | 0.00 (0.01) .85 | 0.02 (0.00) <.01 |
| a | Var (Slope) | 0.00 (0.00) .88 | 0.00 (0.00) .88 | 0.00 (0.00) .05 |
| a | Var (Residual) | 0.57 (0.03) <.01 | 0.57 (0.03) <.01 | 0.03 (0.00) <.01 |
| b | Var (Level) | 1.28 (0.13) <.01 | 1.07 (0.11) <.01 | 0.69 (0.12) <.01 |
| b | Var (Slope) | 0.02 (0.00) <.01 | 0.02 (0.00) <.01 | 0.00 (0.00) .42 |
| b | Var (Residual) | 0.57 (0.03) <.01 | 0.57 (0.03) <.01 | 1.17 (0.07) <.01 |
| a | Covar (Level, Slope) | 0.00 (0.00) .97 | 0.00 (0.00) .99 | -0.00 (0.00) .16 |
| b | Covar (Level, Slope) | -0.07 (0.02) <.01 | -0.07 (0.02) <.01 | -0.01 (0.02) .61 |
|  | Correlation of Levels | 0.758 | 0.712 | 0.270 |
|  | Correlation of Slopes | NaN | NaN | 0.000 |
|  | Correlation of Residuals | 0.019 | 0.016 | 0.011 |
|  | N | 318 | 318 | 318 |
|  | occasions | 5 | 5 | 5 |
|  | parameters | 20 | 28 | 41 |
|  | LL | -2,885 | -2,857 | -2,050 |
|  | AIC | 5,811 | 5,770 | 4,182 |
|  | BIC | 5,886 | 5,875 | 4,336 |

## Summary

Study = *HRS*; Gender = *male*; Process (a) = *gait*

Computed correlations:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| label | process\_b | a | aeh | aehplus |
| Correlation of Levels | serial7 | 0.84 | 0.80 | 0.31 |
| Correlation of Levels | tics | 0.80 | 0.86 | 0.41 |
| Correlation of Levels | word\_de | 0.55 | 0.43 | 0.05 |
| Correlation of Levels | word\_im | 0.76 | 0.71 | 0.27 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| label | process\_b | a | aeh | aehplus |
| Correlation of Slopes | serial7 | Inf | Inf | 0.48 |
| Correlation of Slopes | tics | Inf | NaN | 0.00 |
| Correlation of Slopes | word\_de | NaN | NaN | 0.00 |
| Correlation of Slopes | word\_im | NaN | NaN | 0.00 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| label | process\_b | a | aeh | aehplus |
| Correlation of Residuals | serial7 | 0.08 | 0.06 | 0.00 |
| Correlation of Residuals | tics | 0.05 | 0.04 | -0.01 |
| Correlation of Residuals | word\_de | 0.01 | 0.01 | 0.02 |
| Correlation of Residuals | word\_im | 0.02 | 0.02 | 0.01 |

P-values for corresponding covariances:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| label | process\_b | a | aeh | aehplus |
| Covariance of Levels | serial7 | 0.74 | 0.82 | 0.00 |
| Covariance of Levels | tics | 0.67 | 0.75 | 0.03 |
| Covariance of Levels | word\_de | 0.88 | 0.94 | 0.65 |
| Covariance of Levels | word\_im | 0.74 | 0.82 | 0.03 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| label | process\_b | a | aeh | aehplus |
| Covariance of Slopes | serial7 | 0.48 | 0.56 | 0.01 |
| Covariance of Slopes | tics | 0.78 | 0.85 | 0.60 |
| Covariance of Slopes | word\_de | 1.00 | 1.00 | 0.96 |
| Covariance of Slopes | word\_im | 0.97 | 0.97 | 0.74 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| label | process\_b | a | aeh | aehplus |
| Covariance of Residuals | serial7 | 0.02 | 0.09 | 0.98 |
| Covariance of Residuals | tics | 0.10 | 0.17 | 0.76 |
| Covariance of Residuals | word\_de | 0.51 | 0.62 | 0.60 |
| Covariance of Residuals | word\_im | 0.30 | 0.39 | 0.82 |

#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