NAS : Seed report

Date: 2016-12-16

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

# Available models

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

|  |  |  |
| --- | --- | --- |
| process\_a | process\_b | n\_models |
| fev | animals | 6 |
| fev | digit\_b | 6 |
| fev | digit\_b\_tot | 6 |
| fev | fig\_copy | 6 |
| fev | mmse | 6 |
| fev | pat\_comp | 6 |
| fev | word\_de | 6 |
| fev | word\_im | 6 |

study\_name subgroup model\_type process\_a process\_b n\_models ----------- --------- ----------- ---------- ---------- ---------

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| study\_name | subgroup | model\_type | process\_a | process\_b | n\_models |
| nas | male | 0 | fev | animals | 1 |
| nas | male | 0 | fev | digit\_b | 1 |
| nas | male | 0 | fev | digit\_b\_tot | 1 |
| nas | male | 0 | fev | fig\_copy | 1 |
| nas | male | 0 | fev | mmse | 1 |
| nas | male | 0 | fev | pat\_comp | 1 |
| nas | male | 0 | fev | word\_de | 1 |
| nas | male | 0 | fev | word\_im | 1 |
| nas | male | a | fev | animals | 1 |
| nas | male | a | fev | digit\_b | 1 |
| nas | male | a | fev | digit\_b\_tot | 1 |
| nas | male | a | fev | fig\_copy | 1 |
| nas | male | a | fev | mmse | 1 |
| nas | male | a | fev | pat\_comp | 1 |
| nas | male | a | fev | word\_de | 1 |
| nas | male | a | fev | word\_im | 1 |
| nas | male | ae | fev | animals | 1 |
| nas | male | ae | fev | digit\_b | 1 |
| nas | male | ae | fev | digit\_b\_tot | 1 |
| nas | male | ae | fev | fig\_copy | 1 |
| nas | male | ae | fev | mmse | 1 |
| nas | male | ae | fev | pat\_comp | 1 |
| nas | male | ae | fev | word\_de | 1 |
| nas | male | ae | fev | word\_im | 1 |
| nas | male | aeh | fev | animals | 1 |
| nas | male | aeh | fev | digit\_b | 1 |
| nas | male | aeh | fev | digit\_b\_tot | 1 |
| nas | male | aeh | fev | fig\_copy | 1 |
| nas | male | aeh | fev | mmse | 1 |
| nas | male | aeh | fev | pat\_comp | 1 |
| nas | male | aeh | fev | word\_de | 1 |
| nas | male | aeh | fev | word\_im | 1 |
| nas | male | aehplus | fev | animals | 1 |
| nas | male | aehplus | fev | digit\_b | 1 |
| nas | male | aehplus | fev | digit\_b\_tot | 1 |
| nas | male | aehplus | fev | fig\_copy | 1 |
| nas | male | aehplus | fev | mmse | 1 |
| nas | male | aehplus | fev | pat\_comp | 1 |
| nas | male | aehplus | fev | word\_de | 1 |
| nas | male | aehplus | fev | word\_im | 1 |
| nas | male | full | fev | animals | 1 |
| nas | male | full | fev | digit\_b | 1 |
| nas | male | full | fev | digit\_b\_tot | 1 |
| nas | male | full | fev | fig\_copy | 1 |
| nas | male | full | fev | mmse | 1 |
| nas | male | full | fev | pat\_comp | 1 |
| nas | male | full | fev | word\_de | 1 |
| nas | male | full | fev | word\_im | 1 |

# male

Gender = *male*; Model type: *aehplus*; Process (a) = *fev*; Process (b): *animals*, *digit\_b*, *digit\_b\_tot*, *fig\_copy*, *mmse*, *pat\_comp*, *word\_de*, *word\_im*

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| process | label | animals | digit\_b | digit\_b\_tot | fig\_copy | mmse | pat\_comp | word\_de | word\_im | mean(sd) |
| ab | Covar (Levels) | -0.92 (0.82) .26 | 0.16 (0.25) .52 | 0.22 (0.42) .59 | 3.30 (0.99) <.01 | 0.81 (0.29) <.01 | -0.05 (0.28) .86 | 0.57 (0.32) .07 | 1.35 (0.63) .03 | --- |
| ab | Covar (Slopes) | -0.00 (0.00) .87 | 0.00 (0.00) .22 | 0.00 (0.00) .74 | 0.01 (0.01) .11 | -0.00 (0.00) .61 | -0.00 (0.00) .27 | -0.00 (0.00) .77 | 0.00 (0.00) .38 | --- |
| ab | Covar (Residuals) | 0.15 (0.14) .29 | 0.05 (0.04) .26 | 0.09 (0.07) .19 | -0.60 (0.20) <.01 | -0.05 (0.06) .44 | 0.04 (0.05) .44 | 0.04 (0.05) .50 | -0.13 (0.11) .23 | --- |
| er | Corr (Levels) | -0.05 (0.05) .26 | 0.04 (0.05) .52 | 0.03 (0.05) .59 | 0.19 (0.06) <.01 | 0.20 (0.07) .01 | -0.01 (0.06) .86 | 0.08 (0.05) .07 | 0.11 (0.05) .03 | --- |
| er | Corr (Slopes) | -0.03 (0.17) .87 | 0.51 (0.67) .45 | 0.10 (0.30) .73 | 0.52 (0.43) .23 | -0.12 (0.23) .61 | -0.25 (0.28) .37 | -0.03 (0.12) .77 | 0.15 (0.18) .39 | --- |
| er | Corr (Residuals) | 0.03 (0.03) .30 | 0.03 (0.03) .26 | 0.04 (0.03) .19 | -0.09 (0.03) <.01 | -0.02 (0.03) .44 | 0.03 (0.03) .44 | 0.02 (0.03) .50 | -0.03 (0.03) .23 | --- |
| a | Level | 26.37 (0.52) <.01 | 26.42 (0.52) <.01 | 26.41 (0.52) <.01 | 26.42 (0.52) <.01 | 26.41 (0.52) <.01 | 26.50 (0.53) <.01 | 26.40 (0.52) <.01 | 26.41 (0.52) <.01 | 26.42(0.04) |
| a | Slope | -0.23 (0.04) <.01 | -0.24 (0.04) <.01 | -0.24 (0.04) <.01 | -0.24 (0.04) <.01 | -0.24 (0.04) <.01 | -0.27 (0.04) <.01 | -0.24 (0.04) <.01 | -0.24 (0.04) <.01 | -0.24(0.01) |
| a | Level \* age | -0.23 (0.02) <.01 | -0.24 (0.02) <.01 | -0.24 (0.02) <.01 | -0.24 (0.02) <.01 | -0.24 (0.02) <.01 | -0.23 (0.02) <.01 | -0.24 (0.02) <.01 | -0.24 (0.02) <.01 | -0.24(0.00) |
| a | Level \* education | 0.12 (0.06) .04 | 0.12 (0.06) .05 | 0.12 (0.06) .05 | 0.12 (0.06) .05 | 0.12 (0.06) .05 | 0.12 (0.06) .06 | 0.12 (0.06) .05 | 0.12 (0.06) .05 | 0.12(0.00) |
| a | Level \* height | 0.30 (0.02) <.01 | 0.30 (0.02) <.01 | 0.30 (0.02) <.01 | 0.30 (0.02) <.01 | 0.30 (0.02) <.01 | 0.30 (0.02) <.01 | 0.30 (0.02) <.01 | 0.30 (0.02) <.01 | 0.30(0.00) |
| a | Level \* smoking | -2.14 (0.32) <.01 | -2.16 (0.32) <.01 | -2.16 (0.32) <.01 | -2.16 (0.32) <.01 | -2.17 (0.32) <.01 | -2.19 (0.32) <.01 | -2.16 (0.32) <.01 | -2.16 (0.32) <.01 | -2.16(0.01) |
| a | Level \* cardio | -1.04 (0.35) <.01 | -1.02 (0.35) <.01 | -1.02 (0.35) <.01 | -1.03 (0.35) <.01 | -1.01 (0.35) <.01 | -1.08 (0.35) <.01 | -1.02 (0.35) <.01 | -1.02 (0.35) <.01 | -1.03(0.02) |
| a | Level \* diabetes | -0.88 (0.56) .12 | -0.91 (0.55) .10 | -0.91 (0.55) .10 | -0.91 (0.56) .10 | -0.88 (0.56) .11 | -1.04 (0.55) .06 | -0.90 (0.56) .11 | -0.90 (0.56) .11 | -0.92(0.05) |
| a | Slope \* age | -0.00 (0.00) .18 | -0.00 (0.00) .20 | -0.00 (0.00) .20 | -0.00 (0.00) .17 | -0.00 (0.00) .17 | -0.00 (0.00) .17 | -0.00 (0.00) .20 | -0.00 (0.00) .17 | -0.00(0.00) |
| a | Slope \* education | 0.01 (0.00) .11 | 0.01 (0.00) .07 | 0.01 (0.00) .07 | 0.01 (0.00) .07 | 0.01 (0.00) .07 | 0.01 (0.00) .07 | 0.01 (0.00) .08 | 0.01 (0.00) .07 | 0.01(0.00) |
| a | Slope \* height | -0.00 (0.00) .31 | -0.00 (0.00) .25 | -0.00 (0.00) .25 | -0.00 (0.00) .26 | -0.00 (0.00) .26 | -0.00 (0.00) .28 | -0.00 (0.00) .26 | -0.00 (0.00) .26 | -0.00(0.00) |
| a | Slope \* smoking | -0.01 (0.02) .59 | -0.01 (0.02) .78 | -0.01 (0.02) .76 | -0.00 (0.02) .81 | -0.00 (0.02) .80 | 0.00 (0.02) .95 | -0.00 (0.02) .80 | -0.00 (0.02) .81 | -0.01(0.00) |
| a | Slope \* cardio | -0.04 (0.02) .14 | -0.04 (0.02) .12 | -0.04 (0.02) .10 | -0.04 (0.02) .15 | -0.04 (0.03) .10 | -0.03 (0.03) .32 | -0.04 (0.02) .12 | -0.04 (0.02) .11 | -0.04(0.01) |
| a | Slope \* diabetes | -0.09 (0.05) .07 | -0.09 (0.05) .09 | -0.09 (0.05) .09 | -0.09 (0.05) .09 | -0.09 (0.05) .08 | -0.05 (0.05) .37 | -0.09 (0.05) .08 | -0.09 (0.05) .08 | -0.08(0.01) |
| b | Level | 15.97 (0.57) <.01 | 4.37 (0.18) <.01 | 3.65 (0.28) <.01 | 13.88 (0.61) <.01 | 27.08 (0.21) <.01 | 6.06 (0.19) <.01 | 5.40 (0.23) <.01 | 16.95 (0.46) <.01 | --- |
| b | Slope | -0.09 (0.06) .14 | -0.01 (0.02) .54 | -0.01 (0.02) .77 | -0.17 (0.07) .02 | -0.10 (0.03) <.01 | 0.07 (0.03) .01 | -0.07 (0.02) .01 | -0.16 (0.05) <.01 | --- |
| b | Level \* age | -0.14 (0.02) <.01 | -0.02 (0.01) .01 | -0.04 (0.01) <.01 | -0.15 (0.02) <.01 | -0.06 (0.01) <.01 | 0.07 (0.01) <.01 | -0.07 (0.01) <.01 | -0.16 (0.02) <.01 | --- |
| b | Level \* education | 0.34 (0.06) <.01 | 0.09 (0.02) <.01 | 0.17 (0.03) <.01 | 0.32 (0.07) <.01 | 0.12 (0.02) <.01 | -0.04 (0.02) .02 | 0.11 (0.02) <.01 | 0.25 (0.05) <.01 | --- |
| b | Level \* height | 0.05 (0.03) .03 | 0.01 (0.01) .12 | 0.02 (0.01) .08 | 0.03 (0.03) .27 | 0.01 (0.01) .09 | -0.01 (0.01) .07 | 0.02 (0.01) .10 | 0.03 (0.02) .10 | --- |
| b | Level \* smoking | 0.28 (0.38) .45 | 0.04 (0.11) .75 | 0.18 (0.18) .32 | -0.83 (0.40) .04 | 0.00 (0.13) .97 | 0.03 (0.12) .79 | 0.20 (0.14) .17 | 0.16 (0.28) .56 | --- |
| b | Level \* cardio | -0.14 (0.37) .69 | 0.04 (0.11) .73 | -0.03 (0.17) .88 | -0.99 (0.43) .02 | -0.42 (0.14) <.01 | -0.01 (0.12) .91 | 0.04 (0.15) .76 | 0.20 (0.28) .48 | --- |
| b | Level \* diabetes | 0.18 (0.56) .74 | 0.00 (0.18) .99 | -0.04 (0.29) .88 | -0.04 (0.68) .95 | -0.60 (0.23) .01 | -0.24 (0.18) .20 | -0.16 (0.19) .39 | 0.21 (0.42) .62 | --- |
| b | Slope \* age | -0.01 (0.00) <.01 | -0.00 (0.00) .14 | -0.00 (0.00) .29 | -0.00 (0.00) .21 | -0.00 (0.00) .09 | 0.00 (0.00) .01 | -0.00 (0.00) <.01 | -0.01 (0.00) <.01 | --- |
| b | Slope \* education | -0.01 (0.01) .27 | -0.00 (0.00) .11 | -0.00 (0.00) .06 | -0.01 (0.01) .27 | 0.00 (0.00) .54 | -0.00 (0.00) .55 | -0.00 (0.00) .65 | 0.00 (0.01) .84 | --- |
| b | Slope \* height | -0.00 (0.00) .54 | 0.00 (0.00) .70 | 0.00 (0.00) .83 | -0.00 (0.00) .80 | 0.00 (0.00) .64 | 0.00 (0.00) .54 | -0.00 (0.00) .52 | -0.00 (0.00) .23 | --- |
| b | Slope \* smoking | -0.01 (0.04) .77 | -0.00 (0.01) .87 | -0.01 (0.02) .38 | 0.00 (0.04) .99 | 0.03 (0.02) .10 | 0.00 (0.02) .84 | -0.03 (0.01) .04 | -0.01 (0.03) .77 | --- |
| b | Slope \* cardio | -0.04 (0.04) .35 | -0.02 (0.01) .10 | -0.03 (0.01) .06 | 0.14 (0.05) <.01 | 0.01 (0.02) .37 | 0.02 (0.02) .22 | -0.01 (0.02) .37 | -0.06 (0.03) .05 | --- |
| b | Slope \* diabetes | -0.05 (0.06) .39 | -0.00 (0.02) .80 | -0.00 (0.03) .94 | -0.13 (0.08) .12 | 0.04 (0.03) .14 | 0.09 (0.04) .03 | -0.02 (0.02) .43 | -0.02 (0.05) .72 | --- |
| a | Var (Level) | 23.52 (1.29) <.01 | 23.50 (1.29) <.01 | 23.49 (1.29) <.01 | 23.46 (1.29) <.01 | 23.46 (1.29) <.01 | 23.52 (1.29) <.01 | 23.49 (1.29) <.01 | 23.49 (1.29) <.01 | 23.49(0.02) |
| a | Var (Slope) | 0.04 (0.01) <.01 | 0.03 (0.01) <.01 | 0.03 (0.01) <.01 | 0.03 (0.01) <.01 | 0.03 (0.01) <.01 | 0.04 (0.01) <.01 | 0.03 (0.01) <.01 | 0.03 (0.01) <.01 | 0.03(0.00) |
| a | Var (Residual) | 2.27 (0.14) <.01 | 2.28 (0.14) <.01 | 2.28 (0.14) <.01 | 2.27 (0.14) <.01 | 2.28 (0.14) <.01 | 2.13 (0.16) <.01 | 2.28 (0.14) <.01 | 2.28 (0.14) <.01 | 2.26(0.05) |
| b | Var (Level) | 12.29 (1.16) <.01 | 0.93 (0.10) <.01 | 2.89 (0.27) <.01 | 12.87 (1.42) <.01 | 0.72 (0.26) .01 | 0.93 (0.18) <.01 | 1.97 (0.17) <.01 | 6.80 (0.64) <.01 | --- |
| b | Var (Slope) | 0.02 (0.01) .04 | 0.00 (0.00) .69 | 0.00 (0.00) .41 | 0.01 (0.01) .43 | 0.00 (0.00) .31 | 0.00 (0.00) .44 | 0.01 (0.00) <.01 | 0.01 (0.01) .09 | --- |
| b | Var (Residual) | 10.44 (0.46) <.01 | 0.94 (0.04) <.01 | 2.25 (0.10) <.01 | 17.85 (0.66) <.01 | 2.11 (0.14) <.01 | 0.97 (0.09) <.01 | 1.35 (0.06) <.01 | 6.17 (0.36) <.01 | --- |
| a | Covar (Level, Slope) | -0.03 (0.06) .65 | -0.02 (0.06) .75 | -0.02 (0.06) .74 | -0.02 (0.06) .78 | -0.01 (0.06) .81 | -0.03 (0.07) .71 | -0.02 (0.06) .76 | -0.02 (0.06) .75 | -0.02(0.00) |
| b | Covar (Level, Slope) | -0.10 (0.10) .30 | -0.01 (0.01) .23 | -0.04 (0.02) .04 | 0.07 (0.13) .59 | 0.01 (0.02) .67 | 0.04 (0.02) .01 | 0.00 (0.01) .94 | 0.01 (0.05) .81 | --- |
|  | Correlation of Levels | -0.054 | 0.035 | 0.027 | 0.190 | 0.199 | -0.011 | 0.084 | 0.107 | 0.07(0.09) |
|  | Correlation of Slopes | -0.036 | Inf | 0.121 | 0.517 | -0.121 | -0.226 | -0.065 | 0.149 | Inf(NaN) |
|  | Correlation of Residuals | 0.031 | 0.033 | 0.038 | -0.094 | -0.021 | 0.026 | 0.021 | -0.034 | -0.00(0.05) |
|  | N | 1,131 | 1,131 | 1,131 | 1,131 | 1,131 | 1,131 | 1,131 | 1,131 | 1131.00(0.00) |
|  | occasions | 5 | 6 | 6 | 6 | 6 | 4 | 6 | 6 | 5.62(0.74) |
|  | parameters | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50.00(0.00) |
|  | LL | -25,634 | -22,338 | -23,653 | -26,679 | -23,756 | -21,032 | -23,309 | -25,299 | -2.396257e+04(1,842) |
|  | AIC | 51,369 | 44,775 | 47,406 | 53,457 | 47,613 | 42,164 | 46,719 | 50,698 | 4.802515e+04(3,684) |
|  | BIC | 51,620 | 45,027 | 47,658 | 53,709 | 47,864 | 42,416 | 46,970 | 50,950 | 4.827669e+04(3,684) |

## animals

Gender = *male*; Process (a) = *fev*; Process (b) = *animals*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| process | label | a | ae | aeh | aehplus | full |
| ab | Covar (Levels) | 0.15 (0.89) .87 | -0.36 (0.86) .68 | -1.02 (0.84) .23 | -0.92 (0.82) .26 | -0.94 (0.79) .23 |
| ab | Covar (Slopes) | 0.00 (0.00) .97 | 0.00 (0.00) .94 | 0.00 (0.00) .99 | -0.00 (0.00) .87 | 0.00 (0.00) .90 |
| ab | Covar (Residuals) | 0.14 (0.14) .33 | 0.14 (0.14) .32 | 0.14 (0.14) .33 | 0.15 (0.14) .29 | 0.14 (0.14) .32 |
| er | Corr (Levels) | --- | --- | --- | -0.05 (0.05) .26 | --- |
| er | Corr (Slopes) | --- | --- | --- | -0.03 (0.17) .87 | --- |
| er | Corr (Residuals) | --- | --- | --- | 0.03 (0.03) .30 | --- |
| a | Level | 25.67 (0.17) <.01 | 24.23 (0.50) <.01 | -25.38 (4.16) <.01 | 26.37 (0.52) <.01 | -20.37 (4.25) <.01 |
| a | Slope | -0.21 (0.01) <.01 | -0.26 (0.03) <.01 | 0.05 (0.27) .85 | -0.23 (0.04) <.01 | 0.12 (0.29) .67 |
| a | Level \* age | -0.31 (0.02) <.01 | -0.30 (0.02) <.01 | -0.24 (0.02) <.01 | -0.23 (0.02) <.01 | -0.16 (0.03) <.01 |
| a | Level \* education | --- | 0.20 (0.06) <.01 | 0.14 (0.06) .02 | 0.12 (0.06) .04 | 0.04 (0.07) .52 |
| a | Level \* height | --- | --- | 0.29 (0.02) <.01 | 0.30 (0.02) <.01 | 0.30 (0.02) <.01 |
| a | Level \* smoking | --- | --- | --- | -2.14 (0.32) <.01 | -1.57 (0.32) <.01 |
| a | Level \* cardio | --- | --- | --- | -1.04 (0.35) <.01 | --- |
| a | Level \* diabetes | --- | --- | --- | -0.88 (0.56) .12 | --- |
| a | Slope \* age | -0.00 (0.00) .18 | -0.00 (0.00) .21 | -0.00 (0.00) .11 | -0.00 (0.00) .18 | -0.00 (0.00) .12 |
| a | Slope \* education | --- | 0.01 (0.00) .10 | 0.01 (0.00) .08 | 0.01 (0.00) .11 | 0.00 (0.00) .46 |
| a | Slope \* height | --- | --- | -0.00 (0.00) .25 | -0.00 (0.00) .31 | -0.00 (0.00) .33 |
| a | Slope \* smoking | --- | --- | --- | -0.01 (0.02) .59 | -0.01 (0.02) .59 |
| a | Slope \* cardio | --- | --- | --- | -0.04 (0.02) .14 | --- |
| a | Slope \* diabetes | --- | --- | --- | -0.09 (0.05) .07 | --- |
| b | Level | 18.68 (0.17) <.01 | 16.17 (0.46) <.01 | 6.58 (4.39) .13 | 15.97 (0.57) <.01 | 7.82 (4.59) .09 |
| b | Slope | -0.16 (0.02) <.01 | -0.11 (0.05) .02 | 0.19 (0.44) .67 | -0.09 (0.06) .14 | 0.24 (0.46) .60 |
| b | Level \* age | -0.16 (0.02) <.01 | -0.16 (0.02) <.01 | -0.15 (0.02) <.01 | -0.14 (0.02) <.01 | -0.15 (0.03) <.01 |
| b | Level \* education | --- | 0.35 (0.06) <.01 | 0.34 (0.06) <.01 | 0.34 (0.06) <.01 | 0.32 (0.07) <.01 |
| b | Level \* height | --- | --- | 0.06 (0.03) .03 | 0.05 (0.03) .03 | 0.06 (0.02) .03 |
| b | Level \* smoking | --- | --- | --- | 0.28 (0.38) .45 | 0.32 (0.38) .39 |
| b | Level \* cardio | --- | --- | --- | -0.14 (0.37) .69 | --- |
| b | Level \* diabetes | --- | --- | --- | 0.18 (0.56) .74 | --- |
| b | Slope \* age | -0.01 (0.00) <.01 | -0.01 (0.00) <.01 | -0.01 (0.00) <.01 | -0.01 (0.00) <.01 | -0.00 (0.00) .26 |
| b | Slope \* education | --- | -0.01 (0.01) .30 | -0.01 (0.01) .34 | -0.01 (0.01) .27 | -0.01 (0.01) .06 |
| b | Slope \* height | --- | --- | -0.00 (0.00) .50 | -0.00 (0.00) .54 | -0.00 (0.00) .51 |
| b | Slope \* smoking | --- | --- | --- | -0.01 (0.04) .77 | -0.02 (0.04) .51 |
| b | Slope \* cardio | --- | --- | --- | -0.04 (0.04) .35 | --- |
| b | Slope \* diabetes | --- | --- | --- | -0.05 (0.06) .39 | --- |
| a | Var (Level) | 28.31 (1.42) <.01 | 28.02 (1.40) <.01 | 24.68 (1.33) <.01 | 23.52 (1.29) <.01 | 21.16 (1.15) <.01 |
| a | Var (Slope) | 0.04 (0.01) <.01 | 0.04 (0.01) <.01 | 0.04 (0.01) <.01 | 0.04 (0.01) <.01 | 0.03 (0.00) <.01 |
| a | Var (Residual) | 2.27 (0.14) <.01 | 2.27 (0.14) <.01 | 2.27 (0.14) <.01 | 2.27 (0.14) <.01 | 2.26 (0.14) <.01 |
| b | Var (Level) | 13.33 (1.19) <.01 | 12.45 (1.17) <.01 | 12.33 (1.16) <.01 | 12.29 (1.16) <.01 | 11.95 (1.14) <.01 |
| b | Var (Slope) | 0.02 (0.01) .03 | 0.02 (0.01) .03 | 0.02 (0.01) .03 | 0.02 (0.01) .04 | 0.02 (0.01) .10 |
| b | Var (Residual) | 10.42 (0.46) <.01 | 10.43 (0.46) <.01 | 10.44 (0.46) <.01 | 10.44 (0.46) <.01 | 10.42 (0.45) <.01 |
| a | Covar (Level, Slope) | -0.02 (0.06) .71 | -0.03 (0.06) .62 | -0.01 (0.06) .86 | -0.03 (0.06) .65 | -0.04 (0.06) .51 |
| b | Covar (Level, Slope) | -0.12 (0.10) .23 | -0.10 (0.10) .30 | -0.10 (0.10) .32 | -0.10 (0.10) .30 | -0.08 (0.10) .40 |
|  | Correlation of Levels | 0.0076 | -0.019 | -0.058 | -0.054 | -0.059 |
|  | Correlation of Slopes | 0.0000 | 0.000 | 0.000 | -0.036 | 0.042 |
|  | Correlation of Residuals | 0.0290 | 0.030 | 0.029 | 0.031 | 0.029 |
|  | N | 1,132 | 1,132 | 1,132 | 1,131 | 1,131 |
|  | occasions | 5 | 5 | 5 | 5 | 5 |
|  | parameters | 23 | 30 | 38 | 50 | 183 |
|  | LL | -19,446 | -22,127 | -25,686 | -25,634 | -47,843 |
|  | AIC | 38,938 | 44,314 | 51,447 | 51,369 | 96,052 |
|  | BIC | 39,053 | 44,465 | 51,638 | 51,620 | 96,972 |

## digit\_b

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

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| process | label | a | ae | aeh | aehplus | full |
| ab | Covar (Levels) | 0.43 (0.29) .14 | 0.29 (0.28) .30 | 0.14 (0.26) .58 | 0.16 (0.25) .52 | 0.12 (0.24) .61 |
| ab | Covar (Slopes) | 0.00 (0.00) .12 | 0.00 (0.00) .12 | 0.00 (0.00) .13 | 0.00 (0.00) .22 | 0.00 (0.00) .40 |
| ab | Covar (Residuals) | 0.04 (0.04) .32 | 0.04 (0.04) .30 | 0.05 (0.04) .28 | 0.05 (0.04) .26 | 0.05 (0.04) .27 |
| er | Corr (Levels) | --- | --- | --- | 0.04 (0.05) .52 | --- |
| er | Corr (Slopes) | --- | --- | --- | 0.51 (0.67) .45 | --- |
| er | Corr (Residuals) | --- | --- | --- | 0.03 (0.03) .26 | --- |
| a | Level | 25.68 (0.17) <.01 | 24.26 (0.50) <.01 | -25.58 (4.15) <.01 | 26.42 (0.52) <.01 | -20.43 (4.24) <.01 |
| a | Slope | -0.21 (0.01) <.01 | -0.26 (0.03) <.01 | 0.06 (0.26) .81 | -0.24 (0.04) <.01 | 0.12 (0.28) .66 |
| a | Level \* age | -0.31 (0.02) <.01 | -0.30 (0.02) <.01 | -0.24 (0.02) <.01 | -0.24 (0.02) <.01 | -0.16 (0.03) <.01 |
| a | Level \* education | --- | 0.20 (0.06) <.01 | 0.14 (0.06) .02 | 0.12 (0.06) .05 | 0.03 (0.07) .61 |
| a | Level \* height | --- | --- | 0.29 (0.02) <.01 | 0.30 (0.02) <.01 | 0.30 (0.02) <.01 |
| a | Level \* smoking | --- | --- | --- | -2.16 (0.32) <.01 | -1.60 (0.32) <.01 |
| a | Level \* cardio | --- | --- | --- | -1.02 (0.35) <.01 | --- |
| a | Level \* diabetes | --- | --- | --- | -0.91 (0.55) .10 | --- |
| a | Slope \* age | -0.00 (0.00) .20 | -0.00 (0.00) .22 | -0.00 (0.00) .12 | -0.00 (0.00) .20 | -0.00 (0.00) .10 |
| a | Slope \* education | --- | 0.01 (0.00) .07 | 0.01 (0.00) .05 | 0.01 (0.00) .07 | 0.00 (0.00) .29 |
| a | Slope \* height | --- | --- | -0.00 (0.00) .21 | -0.00 (0.00) .25 | -0.00 (0.00) .24 |
| a | Slope \* smoking | --- | --- | --- | -0.01 (0.02) .78 | -0.00 (0.02) .82 |
| a | Slope \* cardio | --- | --- | --- | -0.04 (0.02) .12 | --- |
| a | Slope \* diabetes | --- | --- | --- | -0.09 (0.05) .09 | --- |
| b | Level | 5.08 (0.05) <.01 | 4.41 (0.14) <.01 | 2.33 (1.29) .07 | 4.37 (0.18) <.01 | 3.12 (1.38) .02 |
| b | Slope | -0.03 (0.00) <.01 | -0.02 (0.01) .16 | -0.05 (0.12) .66 | -0.01 (0.02) .54 | -0.09 (0.12) .46 |
| b | Level \* age | -0.02 (0.01) <.01 | -0.02 (0.01) <.01 | -0.02 (0.01) .01 | -0.02 (0.01) .01 | -0.00 (0.01) .88 |
| b | Level \* education | --- | 0.09 (0.02) <.01 | 0.09 (0.02) <.01 | 0.09 (0.02) <.01 | 0.06 (0.02) <.01 |
| b | Level \* height | --- | --- | 0.01 (0.01) .11 | 0.01 (0.01) .12 | 0.01 (0.01) .17 |
| b | Level \* smoking | --- | --- | --- | 0.04 (0.11) .75 | 0.01 (0.12) .93 |
| b | Level \* cardio | --- | --- | --- | 0.04 (0.11) .73 | --- |
| b | Level \* diabetes | --- | --- | --- | 0.00 (0.18) .99 | --- |
| b | Slope \* age | -0.00 (0.00) .08 | -0.00 (0.00) .07 | -0.00 (0.00) .08 | -0.00 (0.00) .14 | -0.00 (0.00) .01 |
| b | Slope \* education | --- | -0.00 (0.00) .16 | -0.00 (0.00) .14 | -0.00 (0.00) .11 | -0.00 (0.00) .73 |
| b | Slope \* height | --- | --- | 0.00 (0.00) .77 | 0.00 (0.00) .70 | 0.00 (0.00) .61 |
| b | Slope \* smoking | --- | --- | --- | -0.00 (0.01) .87 | -0.00 (0.01) .94 |
| b | Slope \* cardio | --- | --- | --- | -0.02 (0.01) .10 | --- |
| b | Slope \* diabetes | --- | --- | --- | -0.00 (0.02) .80 | --- |
| a | Var (Level) | 28.34 (1.42) <.01 | 28.05 (1.41) <.01 | 24.69 (1.33) <.01 | 23.50 (1.29) <.01 | 21.11 (1.14) <.01 |
| a | Var (Slope) | 0.04 (0.01) <.01 | 0.04 (0.01) <.01 | 0.04 (0.01) <.01 | 0.03 (0.01) <.01 | 0.03 (0.00) <.01 |
| a | Var (Residual) | 2.28 (0.14) <.01 | 2.28 (0.14) <.01 | 2.28 (0.14) <.01 | 2.28 (0.14) <.01 | 2.27 (0.14) <.01 |
| b | Var (Level) | 1.00 (0.11) <.01 | 0.94 (0.10) <.01 | 0.94 (0.10) <.01 | 0.93 (0.10) <.01 | 0.93 (0.11) <.01 |
| b | Var (Slope) | 0.00 (0.00) .57 | 0.00 (0.00) .57 | 0.00 (0.00) .57 | 0.00 (0.00) .69 | 0.00 (0.00) .38 |
| b | Var (Residual) | 0.94 (0.04) <.01 | 0.94 (0.04) <.01 | 0.94 (0.04) <.01 | 0.94 (0.04) <.01 | 0.93 (0.04) <.01 |
| a | Covar (Level, Slope) | -0.02 (0.06) .77 | -0.03 (0.06) .66 | -0.00 (0.06) .94 | -0.02 (0.06) .75 | -0.03 (0.06) .63 |
| b | Covar (Level, Slope) | -0.01 (0.01) .15 | -0.01 (0.01) .18 | -0.01 (0.01) .18 | -0.01 (0.01) .23 | -0.01 (0.01) .12 |
|  | Correlation of Levels | 0.080 | 0.056 | 0.030 | 0.035 | 0.028 |
|  | Correlation of Slopes | Inf | Inf | Inf | Inf | 0.177 |
|  | Correlation of Residuals | 0.029 | 0.031 | 0.032 | 0.033 | 0.033 |
|  | N | 1,132 | 1,132 | 1,132 | 1,131 | 1,131 |
|  | occasions | 6 | 6 | 6 | 6 | 6 |
|  | parameters | 23 | 30 | 38 | 50 | 181 |
|  | LL | -16,140 | -18,826 | -22,385 | -22,338 | -44,464 |
|  | AIC | 32,326 | 37,712 | 44,847 | 44,775 | 89,289 |
|  | BIC | 32,442 | 37,863 | 45,038 | 45,027 | 90,200 |

## digit\_b\_tot

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

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| process | label | a | ae | aeh | aehplus | full |
| ab | Covar (Levels) | 0.67 (0.47) .15 | 0.42 (0.46) .36 | 0.16 (0.43) .71 | 0.22 (0.42) .59 | 0.11 (0.39) .78 |
| ab | Covar (Slopes) | 0.00 (0.00) .54 | 0.00 (0.00) .55 | 0.00 (0.00) .56 | 0.00 (0.00) .74 | 0.00 (0.00) .71 |
| ab | Covar (Residuals) | 0.08 (0.07) .23 | 0.08 (0.07) .21 | 0.08 (0.07) .20 | 0.09 (0.07) .19 | 0.08 (0.07) .21 |
| er | Corr (Levels) | --- | --- | --- | 0.03 (0.05) .59 | --- |
| er | Corr (Slopes) | --- | --- | --- | 0.10 (0.30) .73 | --- |
| er | Corr (Residuals) | --- | --- | --- | 0.04 (0.03) .19 | --- |
| a | Level | 25.68 (0.17) <.01 | 24.26 (0.50) <.01 | -25.57 (4.15) <.01 | 26.41 (0.52) <.01 | -20.44 (4.24) <.01 |
| a | Slope | -0.21 (0.01) <.01 | -0.26 (0.03) <.01 | 0.06 (0.26) .81 | -0.24 (0.04) <.01 | 0.13 (0.28) .66 |
| a | Level \* age | -0.31 (0.02) <.01 | -0.30 (0.02) <.01 | -0.24 (0.02) <.01 | -0.24 (0.02) <.01 | -0.16 (0.03) <.01 |
| a | Level \* education | --- | 0.20 (0.06) <.01 | 0.14 (0.06) .02 | 0.12 (0.06) .05 | 0.03 (0.07) .61 |
| a | Level \* height | --- | --- | 0.29 (0.02) <.01 | 0.30 (0.02) <.01 | 0.30 (0.02) <.01 |
| a | Level \* smoking | --- | --- | --- | -2.16 (0.32) <.01 | -1.59 (0.32) <.01 |
| a | Level \* cardio | --- | --- | --- | -1.02 (0.35) <.01 | --- |
| a | Level \* diabetes | --- | --- | --- | -0.91 (0.55) .10 | --- |
| a | Slope \* age | -0.00 (0.00) .20 | -0.00 (0.00) .22 | -0.00 (0.00) .12 | -0.00 (0.00) .20 | -0.00 (0.00) .10 |
| a | Slope \* education | --- | 0.01 (0.00) .07 | 0.01 (0.00) .05 | 0.01 (0.00) .07 | 0.00 (0.00) .29 |
| a | Slope \* height | --- | --- | -0.00 (0.00) .21 | -0.00 (0.00) .25 | -0.00 (0.00) .24 |
| a | Slope \* smoking | --- | --- | --- | -0.01 (0.02) .76 | -0.01 (0.02) .80 |
| a | Slope \* cardio | --- | --- | --- | -0.04 (0.02) .10 | --- |
| a | Slope \* diabetes | --- | --- | --- | -0.09 (0.05) .09 | --- |
| b | Level | 5.00 (0.08) <.01 | 3.79 (0.22) <.01 | 0.01 (2.05) .99 | 3.65 (0.28) <.01 | 1.58 (2.15) .46 |
| b | Slope | -0.06 (0.01) <.01 | -0.03 (0.02) .14 | -0.03 (0.18) .87 | -0.01 (0.02) .77 | -0.10 (0.19) .60 |
| b | Level \* age | -0.04 (0.01) <.01 | -0.04 (0.01) <.01 | -0.04 (0.01) <.01 | -0.04 (0.01) <.01 | -0.01 (0.01) .62 |
| b | Level \* education | --- | 0.17 (0.03) <.01 | 0.16 (0.03) <.01 | 0.17 (0.03) <.01 | 0.10 (0.03) <.01 |
| b | Level \* height | --- | --- | 0.02 (0.01) .07 | 0.02 (0.01) .08 | 0.02 (0.01) .14 |
| b | Level \* smoking | --- | --- | --- | 0.18 (0.18) .32 | 0.14 (0.18) .45 |
| b | Level \* cardio | --- | --- | --- | -0.03 (0.17) .88 | --- |
| b | Level \* diabetes | --- | --- | --- | -0.04 (0.29) .88 | --- |
| b | Slope \* age | -0.00 (0.00) .22 | -0.00 (0.00) .20 | -0.00 (0.00) .19 | -0.00 (0.00) .29 | -0.00 (0.00) .07 |
| b | Slope \* education | --- | -0.00 (0.00) .11 | -0.00 (0.00) .11 | -0.00 (0.00) .06 | -0.00 (0.00) .69 |
| b | Slope \* height | --- | --- | 0.00 (0.00) .99 | 0.00 (0.00) .83 | 0.00 (0.00) .70 |
| b | Slope \* smoking | --- | --- | --- | -0.01 (0.02) .38 | -0.01 (0.02) .45 |
| b | Slope \* cardio | --- | --- | --- | -0.03 (0.01) .06 | --- |
| b | Slope \* diabetes | --- | --- | --- | -0.00 (0.03) .94 | --- |
| a | Var (Level) | 28.33 (1.42) <.01 | 28.04 (1.41) <.01 | 24.68 (1.33) <.01 | 23.49 (1.29) <.01 | 21.11 (1.14) <.01 |
| a | Var (Slope) | 0.04 (0.01) <.01 | 0.04 (0.01) <.01 | 0.04 (0.01) <.01 | 0.03 (0.01) <.01 | 0.03 (0.00) <.01 |
| a | Var (Residual) | 2.28 (0.14) <.01 | 2.28 (0.14) <.01 | 2.28 (0.14) <.01 | 2.28 (0.14) <.01 | 2.27 (0.14) <.01 |
| b | Var (Level) | 3.12 (0.28) <.01 | 2.92 (0.27) <.01 | 2.90 (0.27) <.01 | 2.89 (0.27) <.01 | 2.73 (0.27) <.01 |
| b | Var (Slope) | 0.00 (0.00) .34 | 0.00 (0.00) .36 | 0.00 (0.00) .36 | 0.00 (0.00) .41 | 0.00 (0.00) .50 |
| b | Var (Residual) | 2.26 (0.10) <.01 | 2.26 (0.10) <.01 | 2.26 (0.10) <.01 | 2.25 (0.10) <.01 | 2.25 (0.10) <.01 |
| a | Covar (Level, Slope) | -0.02 (0.06) .77 | -0.03 (0.06) .66 | -0.00 (0.06) .94 | -0.02 (0.06) .74 | -0.03 (0.06) .62 |
| b | Covar (Level, Slope) | -0.05 (0.02) .02 | -0.04 (0.02) .03 | -0.04 (0.02) .03 | -0.04 (0.02) .04 | -0.04 (0.02) .07 |
|  | Correlation of Levels | 0.071 | 0.046 | 0.019 | 0.027 | 0.014 |
|  | Correlation of Slopes | 0.120 | 0.120 | 0.120 | 0.121 | 0.177 |
|  | Correlation of Residuals | 0.035 | 0.036 | 0.037 | 0.038 | 0.037 |
|  | N | 1,132 | 1,132 | 1,132 | 1,131 | 1,131 |
|  | occasions | 6 | 6 | 6 | 6 | 6 |
|  | parameters | 23 | 30 | 38 | 50 | 181 |
|  | LL | -17,461 | -20,144 | -23,703 | -23,653 | -45,776 |
|  | AIC | 34,969 | 40,347 | 47,483 | 47,406 | 91,914 |
|  | BIC | 35,084 | 40,498 | 47,674 | 47,658 | 92,825 |

## fig\_copy

Gender = *male*; Process (a) = *fev*; Process (b) = *fig\_copy*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| process | label | a | ae | aeh | aehplus | full |
| ab | Covar (Levels) | 4.64 (1.10) <.01 | 4.17 (1.09) <.01 | 3.92 (1.02) <.01 | 3.30 (0.99) <.01 | 2.49 (0.93) .01 |
| ab | Covar (Slopes) | 0.01 (0.01) .14 | 0.01 (0.01) .14 | 0.01 (0.01) .14 | 0.01 (0.01) .11 | 0.01 (0.01) .11 |
| ab | Covar (Residuals) | -0.61 (0.20) <.01 | -0.60 (0.20) <.01 | -0.60 (0.20) <.01 | -0.60 (0.20) <.01 | -0.61 (0.20) <.01 |
| er | Corr (Levels) | --- | --- | --- | 0.19 (0.06) <.01 | --- |
| er | Corr (Slopes) | --- | --- | --- | 0.52 (0.43) .23 | --- |
| er | Corr (Residuals) | --- | --- | --- | -0.09 (0.03) <.01 | --- |
| a | Level | 25.68 (0.17) <.01 | 24.27 (0.50) <.01 | -25.54 (4.15) <.01 | 26.42 (0.52) <.01 | -20.40 (4.24) <.01 |
| a | Slope | -0.21 (0.01) <.01 | -0.27 (0.03) <.01 | 0.05 (0.26) .84 | -0.24 (0.04) <.01 | 0.12 (0.28) .68 |
| a | Level \* age | -0.31 (0.02) <.01 | -0.30 (0.02) <.01 | -0.24 (0.02) <.01 | -0.24 (0.02) <.01 | -0.16 (0.03) <.01 |
| a | Level \* education | --- | 0.20 (0.06) <.01 | 0.14 (0.06) .02 | 0.12 (0.06) .05 | 0.04 (0.07) .59 |
| a | Level \* height | --- | --- | 0.29 (0.02) <.01 | 0.30 (0.02) <.01 | 0.30 (0.02) <.01 |
| a | Level \* smoking | --- | --- | --- | -2.16 (0.32) <.01 | -1.59 (0.32) <.01 |
| a | Level \* cardio | --- | --- | --- | -1.03 (0.35) <.01 | --- |
| a | Level \* diabetes | --- | --- | --- | -0.91 (0.56) .10 | --- |
| a | Slope \* age | -0.00 (0.00) .17 | -0.00 (0.00) .20 | -0.00 (0.00) .10 | -0.00 (0.00) .17 | -0.00 (0.00) .09 |
| a | Slope \* education | --- | 0.01 (0.00) .07 | 0.01 (0.00) .05 | 0.01 (0.00) .07 | 0.00 (0.00) .29 |
| a | Slope \* height | --- | --- | -0.00 (0.00) .22 | -0.00 (0.00) .26 | -0.00 (0.00) .25 |
| a | Slope \* smoking | --- | --- | --- | -0.00 (0.02) .81 | -0.00 (0.02) .85 |
| a | Slope \* cardio | --- | --- | --- | -0.04 (0.02) .15 | --- |
| a | Slope \* diabetes | --- | --- | --- | -0.09 (0.05) .09 | --- |
| b | Level | 15.30 (0.19) <.01 | 12.90 (0.50) <.01 | 8.53 (4.84) .08 | 13.88 (0.61) <.01 | 9.92 (5.00) .05 |
| b | Slope | -0.20 (0.02) <.01 | -0.14 (0.06) .02 | -0.04 (0.48) .93 | -0.17 (0.07) .02 | -0.01 (0.51) .98 |
| b | Level \* age | -0.17 (0.02) <.01 | -0.16 (0.02) <.01 | -0.15 (0.02) <.01 | -0.15 (0.02) <.01 | -0.10 (0.03) <.01 |
| b | Level \* education | --- | 0.33 (0.06) <.01 | 0.33 (0.07) <.01 | 0.32 (0.07) <.01 | 0.24 (0.07) <.01 |
| b | Level \* height | --- | --- | 0.02 (0.03) .37 | 0.03 (0.03) .27 | 0.03 (0.03) .28 |
| b | Level \* smoking | --- | --- | --- | -0.83 (0.40) .04 | -0.73 (0.41) .08 |
| b | Level \* cardio | --- | --- | --- | -0.99 (0.43) .02 | --- |
| b | Level \* diabetes | --- | --- | --- | -0.04 (0.68) .95 | --- |
| b | Slope \* age | -0.00 (0.00) .44 | -0.00 (0.00) .40 | -0.00 (0.00) .39 | -0.00 (0.00) .21 | -0.00 (0.00) .38 |
| b | Slope \* education | --- | -0.01 (0.01) .21 | -0.01 (0.01) .22 | -0.01 (0.01) .27 | -0.01 (0.01) .24 |
| b | Slope \* height | --- | --- | -0.00 (0.00) .85 | -0.00 (0.00) .80 | 0.00 (0.00) .88 |
| b | Slope \* smoking | --- | --- | --- | 0.00 (0.04) .99 | -0.02 (0.05) .73 |
| b | Slope \* cardio | --- | --- | --- | 0.14 (0.05) <.01 | --- |
| b | Slope \* diabetes | --- | --- | --- | -0.13 (0.08) .12 | --- |
| a | Var (Level) | 28.30 (1.42) <.01 | 28.01 (1.40) <.01 | 24.66 (1.33) <.01 | 23.46 (1.29) <.01 | 21.08 (1.14) <.01 |
| a | Var (Slope) | 0.04 (0.01) <.01 | 0.04 (0.01) <.01 | 0.04 (0.01) <.01 | 0.03 (0.01) <.01 | 0.03 (0.00) <.01 |
| a | Var (Residual) | 2.27 (0.14) <.01 | 2.27 (0.14) <.01 | 2.27 (0.14) <.01 | 2.27 (0.14) <.01 | 2.27 (0.14) <.01 |
| b | Var (Level) | 13.84 (1.44) <.01 | 13.07 (1.44) <.01 | 13.05 (1.44) <.01 | 12.87 (1.42) <.01 | 12.40 (1.41) <.01 |
| b | Var (Slope) | 0.01 (0.01) .41 | 0.01 (0.01) .43 | 0.01 (0.01) .42 | 0.01 (0.01) .43 | 0.01 (0.01) .46 |
| b | Var (Residual) | 17.93 (0.67) <.01 | 17.91 (0.66) <.01 | 17.91 (0.66) <.01 | 17.85 (0.66) <.01 | 17.86 (0.66) <.01 |
| a | Covar (Level, Slope) | -0.02 (0.06) .80 | -0.02 (0.06) .69 | -0.00 (0.06) .96 | -0.02 (0.06) .78 | -0.03 (0.06) .65 |
| b | Covar (Level, Slope) | 0.05 (0.13) .68 | 0.07 (0.13) .57 | 0.07 (0.13) .57 | 0.07 (0.13) .59 | 0.06 (0.13) .64 |
|  | Correlation of Levels | 0.234 | 0.218 | 0.219 | 0.190 | 0.154 |
|  | Correlation of Slopes | 0.452 | 0.459 | 0.459 | 0.517 | 0.503 |
|  | Correlation of Residuals | -0.095 | -0.095 | -0.095 | -0.094 | -0.096 |
|  | N | 1,132 | 1,132 | 1,132 | 1,131 | 1,131 |
|  | occasions | 6 | 6 | 6 | 6 | 6 |
|  | parameters | 23 | 30 | 38 | 50 | 181 |
|  | LL | -20,483 | -23,173 | -26,734 | -26,679 | -48,810 |
|  | AIC | 41,013 | 46,405 | 53,544 | 53,457 | 97,983 |
|  | BIC | 41,128 | 46,556 | 53,735 | 53,709 | 98,893 |

## mmse

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

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| process | label | a | ae | aeh | aehplus | full |
| ab | Covar (Levels) | 1.31 (0.34) <.01 | 1.15 (0.32) <.01 | 0.97 (0.30) <.01 | 0.81 (0.29) <.01 | 0.55 (0.27) .04 |
| ab | Covar (Slopes) | -0.00 (0.00) .61 | -0.00 (0.00) .52 | -0.00 (0.00) .48 | -0.00 (0.00) .61 | 0.00 (0.00) .82 |
| ab | Covar (Residuals) | -0.05 (0.06) .41 | -0.05 (0.06) .45 | -0.05 (0.06) .46 | -0.05 (0.06) .44 | -0.05 (0.06) .44 |
| er | Corr (Levels) | --- | --- | --- | 0.20 (0.07) .01 | --- |
| er | Corr (Slopes) | --- | --- | --- | -0.12 (0.23) .61 | --- |
| er | Corr (Residuals) | --- | --- | --- | -0.02 (0.03) .44 | --- |
| a | Level | 25.68 (0.17) <.01 | 24.24 (0.50) <.01 | -25.50 (4.15) <.01 | 26.41 (0.52) <.01 | -20.40 (4.24) <.01 |
| a | Slope | -0.21 (0.01) <.01 | -0.27 (0.03) <.01 | 0.05 (0.26) .86 | -0.24 (0.04) <.01 | 0.12 (0.28) .68 |
| a | Level \* age | -0.31 (0.02) <.01 | -0.30 (0.02) <.01 | -0.24 (0.02) <.01 | -0.24 (0.02) <.01 | -0.16 (0.03) <.01 |
| a | Level \* education | --- | 0.20 (0.06) <.01 | 0.14 (0.06) .02 | 0.12 (0.06) .05 | 0.04 (0.07) .54 |
| a | Level \* height | --- | --- | 0.29 (0.02) <.01 | 0.30 (0.02) <.01 | 0.30 (0.02) <.01 |
| a | Level \* smoking | --- | --- | --- | -2.17 (0.32) <.01 | -1.60 (0.32) <.01 |
| a | Level \* cardio | --- | --- | --- | -1.01 (0.35) <.01 | --- |
| a | Level \* diabetes | --- | --- | --- | -0.88 (0.56) .11 | --- |
| a | Slope \* age | -0.00 (0.00) .15 | -0.00 (0.00) .17 | -0.00 (0.00) .09 | -0.00 (0.00) .17 | -0.00 (0.00) .09 |
| a | Slope \* education | --- | 0.01 (0.00) .06 | 0.01 (0.00) .05 | 0.01 (0.00) .07 | 0.00 (0.00) .30 |
| a | Slope \* height | --- | --- | -0.00 (0.00) .23 | -0.00 (0.00) .26 | -0.00 (0.00) .26 |
| a | Slope \* smoking | --- | --- | --- | -0.00 (0.02) .80 | -0.00 (0.02) .84 |
| a | Slope \* cardio | --- | --- | --- | -0.04 (0.03) .10 | --- |
| a | Slope \* diabetes | --- | --- | --- | -0.09 (0.05) .08 | --- |
| b | Level | 27.76 (0.07) <.01 | 26.90 (0.19) <.01 | 24.33 (1.51) <.01 | 27.08 (0.21) <.01 | 24.76 (1.53) <.01 |
| b | Slope | -0.06 (0.01) <.01 | -0.07 (0.02) <.01 | -0.02 (0.17) .92 | -0.10 (0.03) <.01 | -0.07 (0.18) .72 |
| b | Level \* age | -0.08 (0.01) <.01 | -0.07 (0.01) <.01 | -0.07 (0.01) <.01 | -0.06 (0.01) <.01 | -0.05 (0.01) <.01 |
| b | Level \* education | --- | 0.12 (0.02) <.01 | 0.12 (0.02) <.01 | 0.12 (0.02) <.01 | 0.09 (0.03) <.01 |
| b | Level \* height | --- | --- | 0.01 (0.01) .08 | 0.01 (0.01) .09 | 0.01 (0.01) .12 |
| b | Level \* smoking | --- | --- | --- | 0.00 (0.13) .97 | 0.04 (0.13) .78 |
| b | Level \* cardio | --- | --- | --- | -0.42 (0.14) <.01 | --- |
| b | Level \* diabetes | --- | --- | --- | -0.60 (0.23) .01 | --- |
| b | Slope \* age | -0.00 (0.00) .12 | -0.00 (0.00) .12 | -0.00 (0.00) .10 | -0.00 (0.00) .09 | -0.00 (0.00) .24 |
| b | Slope \* education | --- | 0.00 (0.00) .61 | 0.00 (0.00) .58 | 0.00 (0.00) .54 | 0.00 (0.00) .91 |
| b | Slope \* height | --- | --- | 0.00 (0.00) .76 | 0.00 (0.00) .64 | 0.00 (0.00) .66 |
| b | Slope \* smoking | --- | --- | --- | 0.03 (0.02) .10 | 0.02 (0.02) .21 |
| b | Slope \* cardio | --- | --- | --- | 0.01 (0.02) .37 | --- |
| b | Slope \* diabetes | --- | --- | --- | 0.04 (0.03) .14 | --- |
| a | Var (Level) | 28.30 (1.42) <.01 | 28.01 (1.40) <.01 | 24.65 (1.33) <.01 | 23.46 (1.29) <.01 | 21.10 (1.14) <.01 |
| a | Var (Slope) | 0.04 (0.01) <.01 | 0.04 (0.01) <.01 | 0.04 (0.01) <.01 | 0.03 (0.01) <.01 | 0.03 (0.00) <.01 |
| a | Var (Residual) | 2.28 (0.14) <.01 | 2.28 (0.14) <.01 | 2.28 (0.14) <.01 | 2.28 (0.14) <.01 | 2.27 (0.14) <.01 |
| b | Var (Level) | 0.92 (0.29) <.01 | 0.82 (0.28) <.01 | 0.71 (0.26) .01 | 0.72 (0.26) .01 | 0.68 (0.26) .01 |
| b | Var (Slope) | 0.00 (0.00) .30 | 0.00 (0.00) .28 | 0.00 (0.00) .63 | 0.00 (0.00) .31 | 0.00 (0.00) .37 |
| b | Var (Residual) | 2.12 (0.14) <.01 | 2.12 (0.14) <.01 | 2.15 (0.14) <.01 | 2.11 (0.14) <.01 | 2.10 (0.14) <.01 |
| a | Covar (Level, Slope) | -0.01 (0.06) .88 | -0.02 (0.06) .76 | 0.00 (0.06) .96 | -0.01 (0.06) .81 | -0.02 (0.06) .66 |
| b | Covar (Level, Slope) | 0.01 (0.02) .69 | 0.01 (0.02) .77 | 0.02 (0.02) .34 | 0.01 (0.02) .67 | 0.01 (0.02) .67 |
|  | Correlation of Levels | 0.257 | 0.239 | 0.233 | 0.199 | 0.146 |
|  | Correlation of Slopes | -0.120 | -0.098 | -0.169 | -0.121 | 0.000 |
|  | Correlation of Residuals | -0.023 | -0.021 | -0.021 | -0.021 | -0.021 |
|  | N | 1,132 | 1,132 | 1,132 | 1,131 | 1,131 |
|  | occasions | 6 | 6 | 6 | 6 | 6 |
|  | parameters | 23 | 30 | 38 | 50 | 181 |
|  | LL | -17,594 | -20,267 | -23,828 | -23,756 | -45,883 |
|  | AIC | 35,235 | 40,594 | 47,732 | 47,613 | 92,128 |
|  | BIC | 35,350 | 40,745 | 47,923 | 47,864 | 93,039 |

## pat\_comp

Gender = *male*; Process (a) = *fev*; Process (b) = *pat\_comp*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| process | label | a | ae | aeh | aehplus | full |
| ab | Covar (Levels) | -0.27 (0.30) .38 | -0.20 (0.30) .50 | -0.02 (0.29) .94 | -0.05 (0.28) .86 | 0.20 (0.29) .49 |
| ab | Covar (Slopes) | -0.00 (0.00) .18 | -0.00 (0.00) .19 | -0.00 (0.00) .22 | -0.00 (0.00) .27 | -0.00 (0.00) .18 |
| ab | Covar (Residuals) | 0.04 (0.05) .43 | 0.04 (0.05) .43 | 0.04 (0.05) .45 | 0.04 (0.05) .44 | 0.03 (0.05) .51 |
| er | Corr (Levels) | --- | --- | --- | -0.01 (0.06) .86 | --- |
| er | Corr (Slopes) | --- | --- | --- | -0.25 (0.28) .37 | --- |
| er | Corr (Residuals) | --- | --- | --- | 0.03 (0.03) .44 | --- |
| a | Level | 25.71 (0.17) <.01 | 24.30 (0.51) <.01 | -25.41 (4.17) <.01 | 26.50 (0.53) <.01 | -20.49 (4.25) <.01 |
| a | Slope | -0.22 (0.01) <.01 | -0.28 (0.04) <.01 | 0.06 (0.29) .85 | -0.27 (0.04) <.01 | 0.16 (0.31) .61 |
| a | Level \* age | -0.30 (0.02) <.01 | -0.30 (0.02) <.01 | -0.24 (0.02) <.01 | -0.23 (0.02) <.01 | -0.16 (0.03) <.01 |
| a | Level \* education | --- | 0.20 (0.07) <.01 | 0.14 (0.06) .03 | 0.12 (0.06) .06 | 0.04 (0.07) .50 |
| a | Level \* height | --- | --- | 0.29 (0.02) <.01 | 0.30 (0.02) <.01 | 0.30 (0.02) <.01 |
| a | Level \* smoking | --- | --- | --- | -2.19 (0.32) <.01 | -1.58 (0.33) <.01 |
| a | Level \* cardio | --- | --- | --- | -1.08 (0.35) <.01 | --- |
| a | Level \* diabetes | --- | --- | --- | -1.04 (0.55) .06 | --- |
| a | Slope \* age | -0.00 (0.00) .17 | -0.00 (0.00) .20 | -0.00 (0.00) .10 | -0.00 (0.00) .17 | -0.00 (0.00) .22 |
| a | Slope \* education | --- | 0.01 (0.00) .08 | 0.01 (0.00) .06 | 0.01 (0.00) .07 | 0.00 (0.00) .62 |
| a | Slope \* height | --- | --- | -0.00 (0.00) .24 | -0.00 (0.00) .28 | -0.00 (0.00) .22 |
| a | Slope \* smoking | --- | --- | --- | 0.00 (0.02) .95 | -0.01 (0.03) .81 |
| a | Slope \* cardio | --- | --- | --- | -0.03 (0.03) .32 | --- |
| a | Slope \* diabetes | --- | --- | --- | -0.05 (0.05) .37 | --- |
| b | Level | 5.73 (0.06) <.01 | 6.06 (0.16) <.01 | 8.51 (1.39) <.01 | 6.06 (0.19) <.01 | 8.68 (1.45) <.01 |
| b | Slope | 0.07 (0.01) <.01 | 0.09 (0.03) <.01 | -0.01 (0.21) .96 | 0.07 (0.03) .01 | 0.05 (0.23) .81 |
| b | Level \* age | 0.08 (0.01) <.01 | 0.08 (0.01) <.01 | 0.07 (0.01) <.01 | 0.07 (0.01) <.01 | 0.07 (0.01) <.01 |
| b | Level \* education | --- | -0.04 (0.02) .02 | -0.04 (0.02) .03 | -0.04 (0.02) .02 | -0.02 (0.02) .25 |
| b | Level \* height | --- | --- | -0.01 (0.01) .08 | -0.01 (0.01) .07 | -0.01 (0.01) .13 |
| b | Level \* smoking | --- | --- | --- | 0.03 (0.12) .79 | 0.05 (0.12) .70 |
| b | Level \* cardio | --- | --- | --- | -0.01 (0.12) .91 | --- |
| b | Level \* diabetes | --- | --- | --- | -0.24 (0.18) .20 | --- |
| b | 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) .40 |
| b | Slope \* education | --- | -0.00 (0.00) .47 | -0.00 (0.00) .45 | -0.00 (0.00) .55 | -0.00 (0.00) .64 |
| b | Slope \* height | --- | --- | 0.00 (0.00) .62 | 0.00 (0.00) .54 | 0.00 (0.00) .65 |
| b | Slope \* smoking | --- | --- | --- | 0.00 (0.02) .84 | 0.00 (0.02) .79 |
| b | Slope \* cardio | --- | --- | --- | 0.02 (0.02) .22 | --- |
| b | Slope \* diabetes | --- | --- | --- | 0.09 (0.04) .03 | --- |
| a | Var (Level) | 28.46 (1.44) <.01 | 28.16 (1.42) <.01 | 24.81 (1.34) <.01 | 23.52 (1.29) <.01 | 21.25 (1.16) <.01 |
| a | Var (Slope) | 0.04 (0.01) <.01 | 0.04 (0.01) <.01 | 0.04 (0.01) <.01 | 0.04 (0.01) <.01 | 0.04 (0.01) <.01 |
| a | Var (Residual) | 2.13 (0.16) <.01 | 2.13 (0.16) <.01 | 2.13 (0.16) <.01 | 2.13 (0.16) <.01 | 2.13 (0.16) <.01 |
| b | Var (Level) | 0.96 (0.18) <.01 | 0.94 (0.18) <.01 | 0.93 (0.18) <.01 | 0.93 (0.18) <.01 | 0.96 (0.18) <.01 |
| b | Var (Slope) | 0.00 (0.00) .43 | 0.00 (0.00) .43 | 0.00 (0.00) .44 | 0.00 (0.00) .44 | 0.00 (0.00) .31 |
| b | Var (Residual) | 0.97 (0.09) <.01 | 0.97 (0.09) <.01 | 0.97 (0.09) <.01 | 0.97 (0.09) <.01 | 0.94 (0.08) <.01 |
| a | Covar (Level, Slope) | -0.04 (0.07) .62 | -0.04 (0.07) .54 | -0.02 (0.07) .80 | -0.03 (0.07) .71 | -0.04 (0.07) .51 |
| b | Covar (Level, Slope) | 0.04 (0.02) .01 | 0.04 (0.02) .01 | 0.04 (0.02) .01 | 0.04 (0.02) .01 | 0.03 (0.02) .09 |
|  | Correlation of Levels | -0.051 | -0.039 | -0.0048 | -0.011 | 0.044 |
|  | Correlation of Slopes | -0.274 | -0.274 | -0.2774 | -0.226 | -0.250 |
|  | Correlation of Residuals | 0.026 | 0.026 | 0.0250 | 0.026 | 0.022 |
|  | N | 1,132 | 1,132 | 1,132 | 1,131 | 1,131 |
|  | occasions | 4 | 4 | 4 | 4 | 4 |
|  | parameters | 23 | 30 | 38 | 50 | 181 |
|  | LL | -14,828 | -17,525 | -21,086 | -21,032 | -43,155 |
|  | AIC | 29,703 | 35,110 | 42,247 | 42,164 | 86,671 |
|  | BIC | 29,818 | 35,261 | 42,439 | 42,416 | 87,582 |

## word\_de

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

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| process | label | a | ae | aeh | aehplus | full |
| ab | Covar (Levels) | 0.85 (0.36) .02 | 0.69 (0.35) .05 | 0.49 (0.33) .14 | 0.57 (0.32) .07 | 0.48 (0.30) .11 |
| ab | Covar (Slopes) | 0.00 (0.00) .99 | 0.00 (0.00) .98 | 0.00 (0.00) .94 | -0.00 (0.00) .77 | 0.00 (0.00) .75 |
| ab | Covar (Residuals) | 0.04 (0.05) .50 | 0.04 (0.05) .47 | 0.04 (0.05) .47 | 0.04 (0.05) .50 | 0.03 (0.05) .53 |
| er | Corr (Levels) | --- | --- | --- | 0.08 (0.05) .07 | --- |
| er | Corr (Slopes) | --- | --- | --- | -0.03 (0.12) .77 | --- |
| er | Corr (Residuals) | --- | --- | --- | 0.02 (0.03) .50 | --- |
| a | Level | 25.68 (0.17) <.01 | 24.25 (0.50) <.01 | -25.47 (4.16) <.01 | 26.40 (0.52) <.01 | -20.39 (4.24) <.01 |
| a | Slope | -0.21 (0.01) <.01 | -0.26 (0.03) <.01 | 0.05 (0.26) .84 | -0.24 (0.04) <.01 | 0.12 (0.28) .68 |
| a | Level \* age | -0.31 (0.02) <.01 | -0.30 (0.02) <.01 | -0.24 (0.02) <.01 | -0.24 (0.02) <.01 | -0.16 (0.03) <.01 |
| a | Level \* education | --- | 0.20 (0.06) <.01 | 0.14 (0.06) .02 | 0.12 (0.06) .05 | 0.04 (0.07) .57 |
| a | Level \* height | --- | --- | 0.29 (0.02) <.01 | 0.30 (0.02) <.01 | 0.30 (0.02) <.01 |
| a | Level \* smoking | --- | --- | --- | -2.16 (0.32) <.01 | -1.60 (0.32) <.01 |
| a | Level \* cardio | --- | --- | --- | -1.02 (0.35) <.01 | --- |
| a | Level \* diabetes | --- | --- | --- | -0.90 (0.56) .11 | --- |
| a | Slope \* age | -0.00 (0.00) .19 | -0.00 (0.00) .22 | -0.00 (0.00) .12 | -0.00 (0.00) .20 | -0.00 (0.00) .10 |
| a | Slope \* education | --- | 0.01 (0.00) .07 | 0.01 (0.00) .06 | 0.01 (0.00) .08 | 0.00 (0.00) .31 |
| a | Slope \* height | --- | --- | -0.00 (0.00) .22 | -0.00 (0.00) .26 | -0.00 (0.00) .26 |
| a | Slope \* smoking | --- | --- | --- | -0.00 (0.02) .80 | -0.00 (0.02) .84 |
| a | Slope \* cardio | --- | --- | --- | -0.04 (0.02) .12 | --- |
| a | Slope \* diabetes | --- | --- | --- | -0.09 (0.05) .08 | --- |
| b | Level | 6.34 (0.07) <.01 | 5.54 (0.19) <.01 | 2.55 (1.72) .14 | 5.40 (0.23) <.01 | 2.48 (1.80) .17 |
| b | Slope | -0.10 (0.01) <.01 | -0.09 (0.02) <.01 | 0.06 (0.18) .73 | -0.07 (0.02) .01 | 0.03 (0.19) .89 |
| b | Level \* age | -0.08 (0.01) <.01 | -0.08 (0.01) <.01 | -0.08 (0.01) <.01 | -0.07 (0.01) <.01 | -0.07 (0.01) <.01 |
| b | Level \* education | --- | 0.11 (0.02) <.01 | 0.11 (0.02) <.01 | 0.11 (0.02) <.01 | 0.08 (0.03) <.01 |
| b | Level \* height | --- | --- | 0.02 (0.01) .08 | 0.02 (0.01) .10 | 0.02 (0.01) .11 |
| b | Level \* smoking | --- | --- | --- | 0.20 (0.14) .17 | 0.19 (0.14) .18 |
| b | Level \* cardio | --- | --- | --- | 0.04 (0.15) .76 | --- |
| b | Level \* diabetes | --- | --- | --- | -0.16 (0.19) .39 | --- |
| b | 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) .07 |
| b | Slope \* education | --- | -0.00 (0.00) .69 | -0.00 (0.00) .77 | -0.00 (0.00) .65 | -0.00 (0.00) .49 |
| b | Slope \* height | --- | --- | -0.00 (0.00) .40 | -0.00 (0.00) .52 | -0.00 (0.00) .35 |
| b | Slope \* smoking | --- | --- | --- | -0.03 (0.01) .04 | -0.03 (0.01) .02 |
| b | Slope \* cardio | --- | --- | --- | -0.01 (0.02) .37 | --- |
| b | Slope \* diabetes | --- | --- | --- | -0.02 (0.02) .43 | --- |
| a | Var (Level) | 28.32 (1.42) <.01 | 28.02 (1.40) <.01 | 24.68 (1.33) <.01 | 23.49 (1.29) <.01 | 21.11 (1.14) <.01 |
| a | Var (Slope) | 0.04 (0.01) <.01 | 0.04 (0.01) <.01 | 0.04 (0.01) <.01 | 0.03 (0.01) <.01 | 0.03 (0.00) <.01 |
| a | Var (Residual) | 2.28 (0.14) <.01 | 2.28 (0.14) <.01 | 2.28 (0.14) <.01 | 2.28 (0.14) <.01 | 2.27 (0.14) <.01 |
| b | Var (Level) | 2.07 (0.17) <.01 | 2.00 (0.17) <.01 | 1.99 (0.17) <.01 | 1.97 (0.17) <.01 | 1.91 (0.17) <.01 |
| b | Var (Slope) | 0.01 (0.00) <.01 | 0.01 (0.00) <.01 | 0.01 (0.00) <.01 | 0.01 (0.00) <.01 | 0.01 (0.00) <.01 |
| b | Var (Residual) | 1.35 (0.06) <.01 | 1.35 (0.06) <.01 | 1.35 (0.06) <.01 | 1.35 (0.06) <.01 | 1.35 (0.06) <.01 |
| a | Covar (Level, Slope) | -0.02 (0.06) .78 | -0.02 (0.06) .68 | -0.00 (0.06) .95 | -0.02 (0.06) .76 | -0.03 (0.06) .64 |
| b | Covar (Level, Slope) | -0.00 (0.01) .88 | -0.00 (0.01) .88 | -0.00 (0.01) .92 | 0.00 (0.01) .94 | 0.00 (0.01) .95 |
|  | Correlation of Levels | 0.111 | 0.092 | 0.070 | 0.084 | 0.076 |
|  | Correlation of Slopes | 0.000 | 0.000 | 0.000 | -0.065 | 0.072 |
|  | Correlation of Residuals | 0.021 | 0.022 | 0.022 | 0.021 | 0.019 |
|  | N | 1,132 | 1,132 | 1,132 | 1,131 | 1,131 |
|  | occasions | 6 | 6 | 6 | 6 | 6 |
|  | parameters | 23 | 30 | 38 | 50 | 181 |
|  | LL | -17,111 | -19,800 | -23,361 | -23,309 | -45,435 |
|  | AIC | 34,268 | 39,660 | 46,798 | 46,719 | 91,233 |
|  | BIC | 34,384 | 39,811 | 46,989 | 46,970 | 92,143 |

## word\_im

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

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| process | label | a | ae | aeh | aehplus | full |
| ab | Covar (Levels) | 1.98 (0.72) .01 | 1.60 (0.70) .02 | 1.22 (0.65) .06 | 1.35 (0.63) .03 | 1.00 (0.60) .10 |
| ab | Covar (Slopes) | 0.00 (0.00) .20 | 0.00 (0.00) .24 | 0.00 (0.00) .26 | 0.00 (0.00) .38 | 0.00 (0.00) .31 |
| ab | Covar (Residuals) | -0.14 (0.11) .21 | -0.13 (0.11) .22 | -0.13 (0.11) .22 | -0.13 (0.11) .23 | -0.13 (0.11) .23 |
| er | Corr (Levels) | --- | --- | --- | 0.11 (0.05) .03 | --- |
| er | Corr (Slopes) | --- | --- | --- | 0.15 (0.18) .39 | --- |
| er | Corr (Residuals) | --- | --- | --- | -0.03 (0.03) .23 | --- |
| a | Level | 25.68 (0.17) <.01 | 24.26 (0.50) <.01 | -25.42 (4.15) <.01 | 26.41 (0.52) <.01 | -20.30 (4.24) <.01 |
| a | Slope | -0.21 (0.01) <.01 | -0.27 (0.03) <.01 | 0.05 (0.26) .85 | -0.24 (0.04) <.01 | 0.11 (0.28) .70 |
| a | Level \* age | -0.31 (0.02) <.01 | -0.30 (0.02) <.01 | -0.24 (0.02) <.01 | -0.24 (0.02) <.01 | -0.16 (0.03) <.01 |
| a | Level \* education | --- | 0.20 (0.06) <.01 | 0.14 (0.06) .02 | 0.12 (0.06) .05 | 0.04 (0.07) .58 |
| a | Level \* height | --- | --- | 0.29 (0.02) <.01 | 0.30 (0.02) <.01 | 0.30 (0.02) <.01 |
| a | Level \* smoking | --- | --- | --- | -2.16 (0.32) <.01 | -1.60 (0.32) <.01 |
| a | Level \* cardio | --- | --- | --- | -1.02 (0.35) <.01 | --- |
| a | Level \* diabetes | --- | --- | --- | -0.90 (0.56) .11 | --- |
| a | Slope \* age | -0.00 (0.00) .16 | -0.00 (0.00) .19 | -0.00 (0.00) .10 | -0.00 (0.00) .17 | -0.00 (0.00) .09 |
| a | Slope \* education | --- | 0.01 (0.00) .07 | 0.01 (0.00) .05 | 0.01 (0.00) .07 | 0.00 (0.00) .32 |
| a | Slope \* height | --- | --- | -0.00 (0.00) .23 | -0.00 (0.00) .26 | -0.00 (0.00) .26 |
| a | Slope \* smoking | --- | --- | --- | -0.00 (0.02) .81 | -0.00 (0.02) .86 |
| a | Slope \* cardio | --- | --- | --- | -0.04 (0.02) .11 | --- |
| a | Slope \* diabetes | --- | --- | --- | -0.09 (0.05) .08 | --- |
| b | Level | 18.98 (0.13) <.01 | 17.15 (0.38) <.01 | 11.55 (3.33) <.01 | 16.95 (0.46) <.01 | 13.80 (3.48) <.01 |
| b | Slope | -0.18 (0.01) <.01 | -0.19 (0.04) <.01 | 0.23 (0.33) .47 | -0.16 (0.05) <.01 | 0.05 (0.35) .88 |
| b | Level \* age | -0.17 (0.02) <.01 | -0.17 (0.02) <.01 | -0.16 (0.02) <.01 | -0.16 (0.02) <.01 | -0.13 (0.02) <.01 |
| b | Level \* education | --- | 0.25 (0.05) <.01 | 0.24 (0.05) <.01 | 0.25 (0.05) <.01 | 0.17 (0.06) <.01 |
| b | Level \* height | --- | --- | 0.03 (0.02) .09 | 0.03 (0.02) .10 | 0.03 (0.02) .15 |
| b | Level \* smoking | --- | --- | --- | 0.16 (0.28) .56 | 0.19 (0.29) .50 |
| b | Level \* cardio | --- | --- | --- | 0.20 (0.28) .48 | --- |
| b | Level \* diabetes | --- | --- | --- | 0.21 (0.42) .62 | --- |
| b | Slope \* 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) .02 |
| b | Slope \* education | --- | 0.00 (0.00) .84 | 0.00 (0.01) .73 | 0.00 (0.01) .84 | 0.00 (0.01) .87 |
| b | Slope \* height | --- | --- | -0.00 (0.00) .20 | -0.00 (0.00) .23 | -0.00 (0.00) .13 |
| b | Slope \* smoking | --- | --- | --- | -0.01 (0.03) .77 | -0.02 (0.03) .52 |
| b | Slope \* cardio | --- | --- | --- | -0.06 (0.03) .05 | --- |
| b | Slope \* diabetes | --- | --- | --- | -0.02 (0.05) .72 | --- |
| a | Var (Level) | 28.32 (1.42) <.01 | 28.02 (1.40) <.01 | 24.68 (1.33) <.01 | 23.49 (1.29) <.01 | 21.12 (1.14) <.01 |
| a | Var (Slope) | 0.04 (0.01) <.01 | 0.04 (0.01) <.01 | 0.04 (0.01) <.01 | 0.03 (0.01) <.01 | 0.03 (0.00) <.01 |
| a | Var (Residual) | 2.28 (0.14) <.01 | 2.28 (0.14) <.01 | 2.28 (0.14) <.01 | 2.28 (0.14) <.01 | 2.27 (0.14) <.01 |
| b | Var (Level) | 7.29 (0.66) <.01 | 6.89 (0.64) <.01 | 6.84 (0.64) <.01 | 6.80 (0.64) <.01 | 6.52 (0.63) <.01 |
| b | Var (Slope) | 0.01 (0.01) .08 | 0.01 (0.01) .07 | 0.01 (0.01) .08 | 0.01 (0.01) .09 | 0.01 (0.01) .09 |
| b | Var (Residual) | 6.21 (0.36) <.01 | 6.19 (0.36) <.01 | 6.19 (0.36) <.01 | 6.17 (0.36) <.01 | 6.14 (0.36) <.01 |
| a | Covar (Level, Slope) | -0.02 (0.06) .78 | -0.02 (0.06) .68 | -0.00 (0.06) .94 | -0.02 (0.06) .75 | -0.03 (0.06) .62 |
| b | Covar (Level, Slope) | 0.01 (0.05) .88 | 0.00 (0.05) .92 | 0.01 (0.05) .85 | 0.01 (0.05) .81 | 0.01 (0.05) .85 |
|  | Correlation of Levels | 0.138 | 0.116 | 0.094 | 0.107 | 0.085 |
|  | Correlation of Slopes | 0.244 | 0.195 | 0.195 | 0.149 | 0.160 |
|  | Correlation of Residuals | -0.036 | -0.035 | -0.035 | -0.034 | -0.034 |
|  | N | 1,132 | 1,132 | 1,132 | 1,131 | 1,131 |
|  | occasions | 6 | 6 | 6 | 6 | 6 |
|  | parameters | 23 | 30 | 38 | 50 | 181 |
|  | LL | -19,111 | -21,791 | -25,352 | -25,299 | -47,420 |
|  | AIC | 38,269 | 43,642 | 50,779 | 50,698 | 95,203 |
|  | BIC | 38,384 | 43,793 | 50,970 | 50,950 | 96,113 |

## Summary

Study = *NAS*; Gender = *male*; Process (a) = *fev*

Computed correlations:

label

process\_b

0

a

ae

aeh

aehplus

full

Correlation of Levels

animals

.

0.01

-0.02

-0.06

-0.05

-0.06

Correlation of Levels

digit\_b

.

0.08

0.06

0.03

0.03

0.03

Correlation of Levels

digit\_b\_tot

.

0.07

0.05

0.02

0.03

0.01

Correlation of Levels

fig\_copy

.

0.23

0.22

0.22

0.19

0.15

Correlation of Levels

mmse

.

0.26

0.24

0.23

0.20

0.15

Correlation of Levels

pat\_comp

.

-0.05

-0.04

-0.00

-0.01

0.04

Correlation of Levels

word\_de

.

0.11

0.09

0.07

0.08

0.08

Correlation of Levels

word\_im

.

0.14

0.12

0.09

0.11

0.09

label

process\_b

0

a

ae

aeh

aehplus

full

Correlation of Slopes

animals

.

0.00

0.00

0.00

-0.04

0.04

Correlation of Slopes

digit\_b

.

Inf

Inf

Inf

Inf

0.18

Correlation of Slopes

digit\_b\_tot

.

0.12

0.12

0.12

0.12

0.18

Correlation of Slopes

fig\_copy

.

0.45

0.46

0.46

0.52

0.50

Correlation of Slopes

mmse

.

-0.12

-0.10

-0.17

-0.12

0.00

Correlation of Slopes

pat\_comp

.

-0.27

-0.27

-0.28

-0.23

-0.25

Correlation of Slopes

word\_de

.

0.00

0.00

0.00

-0.06

0.07

Correlation of Slopes

word\_im

.

0.24

0.20

0.20

0.15

0.16

label

process\_b

0

a

ae

aeh

aehplus

full

Correlation of Residuals

animals

0.03

0.03

0.03

0.03

0.03

0.03

Correlation of Residuals

digit\_b

0.03

0.03

0.03

0.03

0.03

0.03

Correlation of Residuals

digit\_b\_tot

0.03

0.04

0.04

0.04

0.04

0.04

Correlation of Residuals

fig\_copy

-0.10

-0.10

-0.09

-0.09

-0.09

-0.10

Correlation of Residuals

mmse

-0.02

-0.02

-0.02

-0.02

-0.02

-0.02

Correlation of Residuals

pat\_comp

0.03

0.03

0.03

0.03

0.03

0.02

Correlation of Residuals

word\_de

0.02

0.02

0.02

0.02

0.02

0.02

Correlation of Residuals

word\_im

-0.04

-0.04

-0.04

-0.03

-0.03

-0.03

P-values for corresponding covariances:

label

process\_b

0

a

ae

aeh

aehplus

full

Covariance of Levels

animals

0.01

0.87

0.68

0.23

0.26

0.23

Covariance of Levels

digit\_b

0.01

0.14

0.30

0.58

0.52

0.61

Covariance of Levels

digit\_b\_tot

0.01

0.15

0.36

0.71

0.59

0.78

Covariance of Levels

fig\_copy

0.00

0.00

0.00

0.00

0.00

0.01

Covariance of Levels

mmse

0.00

0.00

0.00

0.00

0.00

0.04

Covariance of Levels

pat\_comp

0.00

0.38

0.50

0.94

0.86

0.49

Covariance of Levels

word\_de

0.00

0.02

0.05

0.14

0.07

0.11

Covariance of Levels

word\_im

0.00

0.01

0.02

0.06

0.03

0.10

label

process\_b

0

a

ae

aeh

aehplus

full

Covariance of Slopes

animals

0.84

0.97

0.94

0.99

0.87

0.90

Covariance of Slopes

digit\_b

0.10

0.12

0.12

0.13

0.22

0.40

Covariance of Slopes

digit\_b\_tot

0.49

0.54

0.55

0.56

0.74

0.71

Covariance of Slopes

fig\_copy

0.13

0.14

0.14

0.14

0.11

0.11

Covariance of Slopes

mmse

0.69

0.61

0.52

0.48

0.61

0.82

Covariance of Slopes

pat\_comp

0.12

0.18

0.19

0.22

0.27

0.18

Covariance of Slopes

word\_de

0.85

1.00

0.98

0.94

0.77

0.75

Covariance of Slopes

word\_im

0.14

0.20

0.24

0.26

0.38

0.31

label

process\_b

0

a

ae

aeh

aehplus

full

Covariance of Residuals

animals

0.30

0.33

0.32

0.33

0.29

0.32

Covariance of Residuals

digit\_b

0.33

0.32

0.30

0.28

0.26

0.27

Covariance of Residuals

digit\_b\_tot

0.24

0.23

0.21

0.20

0.19

0.21

Covariance of Residuals

fig\_copy

0.00

0.00

0.00

0.00

0.00

0.00

Covariance of Residuals

mmse

0.40

0.41

0.45

0.46

0.44

0.44

Covariance of Residuals

pat\_comp

0.36

0.43

0.43

0.45

0.44

0.51

Covariance of Residuals

word\_de

0.50

0.50

0.47

0.47

0.50

0.53

Covariance of Residuals

word\_im

0.20

0.21

0.22

0.22

0.23

0.23

#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 R6\_2.2.0 gsubfn\_0.6-6 rmarkdown\_1.1   
[25] pander\_0.6.0 tidyr\_0.6.0 readr\_1.0.0 scales\_0.4.1 htmltools\_0.3.5 rsconnect\_0.5   
[31] assertthat\_0.1 testit\_0.5 xtable\_1.8-2 colorspace\_1.2-7 stringi\_1.1.2 lazyeval\_0.2.0   
[37] munsell\_0.4.3