NuAge : Seed Report

Date: 2016-12-04

Table of Contents

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

# Available models

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

|  |  |  |
| --- | --- | --- |
| process\_a | process\_b | n\_models |
| grip | mmms | 6 |
| grip | mmse | 6 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| study\_name | subgroup | model\_type | process\_a | process\_b | n\_models |
| nuage | female | a | grip | mmms | 1 |
| nuage | female | a | grip | mmse | 1 |
| nuage | female | aeh | grip | mmms | 1 |
| nuage | female | aeh | grip | mmse | 1 |
| nuage | female | aehplus | grip | mmms | 1 |
| nuage | female | aehplus | grip | mmse | 1 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| study\_name | subgroup | model\_type | process\_a | process\_b | n\_models |
| nuage | male | a | grip | mmms | 1 |
| nuage | male | a | grip | mmse | 1 |
| nuage | male | aeh | grip | mmms | 1 |
| nuage | male | aeh | grip | mmse | 1 |
| nuage | male | aehplus | grip | mmms | 1 |
| nuage | male | aehplus | grip | mmse | 1 |

# female

Gender = *female*; Model type: *aehplus*; Process (a) = *grip*; Process (b): *mmms*, *mmse*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| process | label | mmms | mmse | mean(sd) |
| a | Level | 59.87 (1.06) <.01 | 59.86 (1.06) <.01 | 59.86(0.00) |
| a | Slope | -2.08 (0.28) <.01 | -2.08 (0.28) <.01 | -2.08(0.00) |
| a | Level \* age | -0.95 (0.11) <.01 | -0.95 (0.11) <.01 | -0.95(0.00) |
| a | Level \* education | 0.02 (0.13) .88 | 0.02 (0.13) .88 | 0.02(0.00) |
| a | Level \* height | -9.32 (7.96) .24 | -9.35 (7.95) .24 | -9.33(0.02) |
| a | Level \* smoking | 1.10 (1.00) .27 | 1.10 (1.00) .27 | 1.10(0.00) |
| a | Level \* cardio | 2.61 (1.26) .04 | 2.61 (1.26) .04 | 2.61(0.00) |
| a | Level \* diabetes | -0.34 (1.86) .86 | -0.34 (1.87) .85 | -0.34(0.00) |
| a | Slope \* age | 0.02 (0.03) .48 | 0.02 (0.03) .45 | 0.02(0.00) |
| a | Slope \* education | -0.02 (0.03) .55 | -0.02 (0.03) .54 | -0.02(0.00) |
| a | Slope \* height | -1.16 (1.98) .56 | -1.17 (1.97) .55 | -1.16(0.00) |
| a | Slope \* smoking | 0.49 (0.25) .05 | 0.49 (0.25) .05 | 0.49(0.00) |
| a | Slope \* cardio | -0.51 (0.31) .10 | -0.50 (0.31) .10 | -0.51(0.01) |
| a | Slope \* diabetes | -0.45 (0.49) .36 | -0.43 (0.49) .37 | -0.44(0.01) |
| b | Level | 93.92 (0.28) <.01 | 28.57 (0.09) <.01 | --- |
| b | Slope | -0.36 (0.13) <.01 | -0.11 (0.05) .03 | --- |
| b | Level \* age | -0.22 (0.03) <.01 | -0.08 (0.01) <.01 | --- |
| b | Level \* education | 0.37 (0.03) <.01 | 0.06 (0.01) <.01 | --- |
| b | Level \* height | 6.48 (1.99) <.01 | -0.00 (0.69) .99 | --- |
| b | Level \* smoking | 0.20 (0.25) .41 | -0.03 (0.09) .75 | --- |
| b | Level \* cardio | -0.05 (0.31) .86 | -0.14 (0.11) .21 | --- |
| b | Level \* diabetes | -0.92 (0.48) .06 | -0.09 (0.16) .58 | --- |
| b | Slope \* age | -0.06 (0.01) <.01 | -0.01 (0.00) .01 | --- |
| b | Slope \* education | 0.01 (0.01) .71 | 0.00 (0.01) .71 | --- |
| b | Slope \* height | -0.79 (1.08) .47 | 0.01 (0.38) .98 | --- |
| b | Slope \* smoking | 0.12 (0.12) .28 | 0.04 (0.04) .33 | --- |
| b | Slope \* cardio | -0.11 (0.15) .47 | 0.01 (0.06) .86 | --- |
| b | Slope \* diabetes | 0.01 (0.20) .95 | 0.03 (0.08) .73 | --- |
| a | Var (Level) | 176.91 (10.91) <.01 | 176.92 (10.91) <.01 | 176.92(0.01) |
| a | Var (Slope) | 2.69 (0.88) <.01 | 2.69 (0.88) <.01 | 2.69(0.00) |
| a | Var (Residual) | 37.88 (2.67) <.01 | 37.87 (2.67) <.01 | 37.87(0.00) |
| a | Covar (Level, Slope) | -2.43 (2.04) .23 | -2.40 (2.04) .24 | -2.42(0.02) |
| b | Var (Level) | 7.74 (0.74) <.01 | 0.65 (0.19) <.01 | --- |
| b | Var (Slope) | 0.76 (0.33) .02 | 0.04 (0.07) .59 | --- |
| b | Var (Residual) | 8.54 (0.41) <.01 | 1.64 (0.32) <.01 | --- |
| b | Covar (Level, Slope) | 2.14 (0.38) <.01 | 0.14 (0.10) .17 | --- |
| ab | Covar (Levels) | 1.64 (1.87) .38 | 0.86 (0.65) .18 | --- |
| ab | Covar (Slopes) | 0.40 (0.28) .15 | 0.05 (0.10) .60 | --- |
| ab | Covar (Residuals) | 0.39 (0.41) .34 | -0.02 (0.19) .92 | --- |
|  | Correlation of Levels | 0.044 | 0.0804 | 0.06(0.03) |
|  | Correlation of Slopes | 0.277 | 0.1606 | 0.22(0.08) |
|  | Correlation of Residuals | 0.022 | -0.0024 | 0.01(0.02) |
|  | N | 934 | 934 | 934.00(0.00) |
|  | occasions | 4 | 4 | 4.00(0.00) |
|  | parameters | NA | NA | --- |
|  | LL | -21,013 | -17,959 | -1.948633e+04(2,159) |
|  | AIC | 42,108 | 36,001 | 3.905465e+04(4,319) |
|  | BIC | 42,307 | 36,199 | 3.925307e+04(4,319) |

## mmms

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

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| process | label | a | aeh | aehplus |
| a | Level | 60.95 (0.71) <.01 | 60.54 (0.99) <.01 | 59.87 (1.06) <.01 |
| a | Slope | -2.05 (0.18) <.01 | -2.00 (0.26) <.01 | -2.08 (0.28) <.01 |
| a | Level \* age | -0.90 (0.11) <.01 | -0.94 (0.11) <.01 | -0.95 (0.11) <.01 |
| a | Level \* education | --- | 0.02 (0.13) .87 | 0.02 (0.13) .88 |
| a | Level \* height | --- | -10.12 (7.98) .20 | -9.32 (7.96) .24 |
| a | Level \* smoking | --- | --- | 1.10 (1.00) .27 |
| a | Level \* cardio | --- | --- | 2.61 (1.26) .04 |
| a | Level \* diabetes | --- | --- | -0.34 (1.86) .86 |
| a | Slope \* age | 0.01 (0.03) .73 | 0.01 (0.03) .76 | 0.02 (0.03) .48 |
| a | Slope \* education | --- | -0.02 (0.04) .61 | -0.02 (0.03) .55 |
| a | Slope \* height | --- | -0.56 (1.97) .78 | -1.16 (1.98) .56 |
| a | Slope \* smoking | --- | --- | 0.49 (0.25) .05 |
| a | Slope \* cardio | --- | --- | -0.51 (0.31) .10 |
| a | Slope \* diabetes | --- | --- | -0.45 (0.49) .36 |
| b | Level | 95.38 (0.18) <.01 | 93.88 (0.26) <.01 | 93.92 (0.28) <.01 |
| b | Slope | -0.27 (0.06) <.01 | -0.33 (0.12) .01 | -0.36 (0.13) <.01 |
| b | Level \* age | -0.26 (0.03) <.01 | -0.22 (0.03) <.01 | -0.22 (0.03) <.01 |
| b | Level \* education | --- | 0.38 (0.03) <.01 | 0.37 (0.03) <.01 |
| b | Level \* height | --- | 6.58 (2.00) <.01 | 6.48 (1.99) <.01 |
| b | Level \* smoking | --- | --- | 0.20 (0.25) .41 |
| b | Level \* cardio | --- | --- | -0.05 (0.31) .86 |
| b | Level \* diabetes | --- | --- | -0.92 (0.48) .06 |
| b | Slope \* age | -0.06 (0.01) <.01 | -0.06 (0.01) <.01 | -0.06 (0.01) <.01 |
| b | Slope \* education | --- | 0.01 (0.01) .70 | 0.01 (0.01) .71 |
| b | Slope \* height | --- | -0.66 (1.06) .53 | -0.79 (1.08) .47 |
| b | Slope \* smoking | --- | --- | 0.12 (0.12) .28 |
| b | Slope \* cardio | --- | --- | -0.11 (0.15) .47 |
| b | Slope \* diabetes | --- | --- | 0.01 (0.20) .95 |
| a | Var (Level) | 179.05 (10.95) <.01 | 178.22 (10.93) <.01 | 176.91 (10.91) <.01 |
| a | Var (Slope) | 2.82 (0.91) <.01 | 2.81 (0.91) <.01 | 2.69 (0.88) <.01 |
| a | Var (Residual) | 37.88 (2.67) <.01 | 37.85 (2.67) <.01 | 37.88 (2.67) <.01 |
| a | Covar (Level, Slope) | -2.59 (2.06) .21 | -2.53 (2.06) .22 | -2.43 (2.04) .23 |
| b | Var (Level) | 10.13 (0.87) <.01 | 7.81 (0.74) <.01 | 7.74 (0.74) <.01 |
| b | Var (Slope) | 0.65 (0.31) .04 | 0.76 (0.33) .02 | 0.76 (0.33) .02 |
| b | Var (Residual) | 8.77 (0.43) <.01 | 8.54 (0.41) <.01 | 8.54 (0.41) <.01 |
| b | Covar (Level, Slope) | 2.28 (0.39) <.01 | 2.15 (0.38) <.01 | 2.14 (0.38) <.01 |
| ab | Covar (Levels) | 1.65 (2.00) .41 | 1.69 (1.87) .36 | 1.64 (1.87) .38 |
| ab | Covar (Slopes) | 0.47 (0.27) .09 | 0.41 (0.28) .14 | 0.40 (0.28) .15 |
| ab | Covar (Residuals) | 0.32 (0.42) .44 | 0.39 (0.41) .34 | 0.39 (0.41) .34 |
|  | Correlation of Levels | 0.039 | 0.045 | 0.044 |
|  | Correlation of Slopes | 0.345 | 0.283 | 0.277 |
|  | Correlation of Residuals | 0.018 | 0.022 | 0.022 |
|  | N | 939 | 934 | 934 |
|  | occasions | 4 | 4 | 4 |
|  | parameters | NA | NA | NA |
|  | LL | -21,197 | -21,023 | -21,013 |
|  | AIC | 42,436 | 42,104 | 42,108 |
|  | BIC | 42,538 | 42,244 | 42,307 |

## mmse

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

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| process | label | a | aeh | aehplus |
| a | Level | 60.95 (0.71) <.01 | 60.53 (0.99) <.01 | 59.86 (1.06) <.01 |
| a | Slope | -2.05 (0.18) <.01 | -2.00 (0.26) <.01 | -2.08 (0.28) <.01 |
| a | Level \* age | -0.90 (0.11) <.01 | -0.94 (0.11) <.01 | -0.95 (0.11) <.01 |
| a | Level \* education | --- | 0.02 (0.13) .87 | 0.02 (0.13) .88 |
| a | Level \* height | --- | -10.14 (7.98) .20 | -9.35 (7.95) .24 |
| a | Level \* smoking | --- | --- | 1.10 (1.00) .27 |
| a | Level \* cardio | --- | --- | 2.61 (1.26) .04 |
| a | Level \* diabetes | --- | --- | -0.34 (1.87) .85 |
| a | Slope \* age | 0.01 (0.03) .69 | 0.01 (0.03) .72 | 0.02 (0.03) .45 |
| a | Slope \* education | --- | -0.02 (0.04) .59 | -0.02 (0.03) .54 |
| a | Slope \* height | --- | -0.56 (1.97) .78 | -1.17 (1.97) .55 |
| a | Slope \* smoking | --- | --- | 0.49 (0.25) .05 |
| a | Slope \* cardio | --- | --- | -0.50 (0.31) .10 |
| a | Slope \* diabetes | --- | --- | -0.43 (0.49) .37 |
| b | Level | 28.80 (0.06) <.01 | 28.53 (0.08) <.01 | 28.57 (0.09) <.01 |
| b | Slope | -0.08 (0.02) <.01 | -0.09 (0.04) .05 | -0.11 (0.05) .03 |
| b | Level \* age | -0.08 (0.01) <.01 | -0.08 (0.01) <.01 | -0.08 (0.01) <.01 |
| b | Level \* education | --- | 0.06 (0.01) <.01 | 0.06 (0.01) <.01 |
| b | Level \* height | --- | 0.05 (0.69) .94 | -0.00 (0.69) .99 |
| b | Level \* smoking | --- | --- | -0.03 (0.09) .75 |
| b | Level \* cardio | --- | --- | -0.14 (0.11) .21 |
| b | Level \* diabetes | --- | --- | -0.09 (0.16) .58 |
| b | Slope \* age | -0.01 (0.00) <.01 | -0.01 (0.00) <.01 | -0.01 (0.00) .01 |
| b | Slope \* education | --- | 0.00 (0.01) .73 | 0.00 (0.01) .71 |
| b | Slope \* height | --- | 0.03 (0.37) .94 | 0.01 (0.38) .98 |
| b | Slope \* smoking | --- | --- | 0.04 (0.04) .33 |
| b | Slope \* cardio | --- | --- | 0.01 (0.06) .86 |
| b | Slope \* diabetes | --- | --- | 0.03 (0.08) .73 |
| a | Var (Level) | 179.04 (10.95) <.01 | 178.23 (10.94) <.01 | 176.92 (10.91) <.01 |
| a | Var (Slope) | 2.82 (0.91) <.01 | 2.81 (0.91) <.01 | 2.69 (0.88) <.01 |
| a | Var (Residual) | 37.87 (2.66) <.01 | 37.84 (2.67) <.01 | 37.87 (2.67) <.01 |
| a | Covar (Level, Slope) | -2.55 (2.06) .22 | -2.50 (2.06) .22 | -2.40 (2.04) .24 |
| b | Var (Level) | 0.72 (0.20) <.01 | 0.65 (0.19) <.01 | 0.65 (0.19) <.01 |
| b | Var (Slope) | 0.04 (0.07) .61 | 0.04 (0.07) .59 | 0.04 (0.07) .59 |
| b | Var (Residual) | 1.66 (0.32) <.01 | 1.64 (0.32) <.01 | 1.64 (0.32) <.01 |
| b | Covar (Level, Slope) | 0.14 (0.11) .18 | 0.14 (0.10) .18 | 0.14 (0.10) .17 |
| ab | Covar (Levels) | 0.77 (0.67) .25 | 0.80 (0.65) .21 | 0.86 (0.65) .18 |
| ab | Covar (Slopes) | 0.06 (0.10) .56 | 0.06 (0.10) .57 | 0.05 (0.10) .60 |
| ab | Covar (Residuals) | -0.01 (0.19) .94 | -0.02 (0.19) .91 | -0.02 (0.19) .92 |
|  | Correlation of Levels | 0.0673 | 0.0746 | 0.0804 |
|  | Correlation of Slopes | 0.1826 | 0.1692 | 0.1606 |
|  | Correlation of Residuals | -0.0018 | -0.0025 | -0.0024 |
|  | N | 939 | 934 | 934 |
|  | occasions | 4 | 4 | 4 |
|  | parameters | NA | NA | NA |
|  | LL | -18,068 | -17,968 | -17,959 |
|  | AIC | 36,179 | 35,994 | 36,001 |
|  | BIC | 36,281 | 36,134 | 36,199 |

## Summary

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

Computed correlations:

label

process\_b

a

aeh

aehplus

Correlation of Levels

mmms

0.04

0.05

0.04

Correlation of Levels

mmse

0.07

0.07

0.08

label

process\_b

a

aeh

aehplus

Correlation of Slopes

mmms

0.35

0.28

0.28

Correlation of Slopes

mmse

0.18

0.17

0.16

label

process\_b

a

aeh

aehplus

Correlation of Residuals

mmms

0.02

0.02

0.02

Correlation of Residuals

mmse

-0.00

-0.00

-0.00

P-values for corresponding covariances:

label

process\_b

a

aeh

aehplus

Covariance of Levels

mmms

0.41

0.36

0.38

Covariance of Levels

mmse

0.25

0.21

0.18

label

process\_b

a

aeh

aehplus

Covariance of Slopes

mmms

0.09

0.14

0.15

Covariance of Slopes

mmse

0.56

0.57

0.60

label

process\_b

a

aeh

aehplus

Covariance of Residuals

mmms

0.44

0.34

0.34

Covariance of Residuals

mmse

0.94

0.91

0.92

# male

Gender = *male*; Model type: *aehplus*; Process (a) = *grip*; Process (b): *mmms*, *mmse*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| process | label | mmms | mmse | mean(sd) |
| a | Level | 80.95 (1.32) <.01 | 80.95 (1.32) <.01 | 80.95(0.00) |
| a | Slope | -2.39 (0.29) <.01 | -2.39 (0.29) <.01 | -2.39(0.00) |
| a | Level \* age | -1.39 (0.13) <.01 | -1.39 (0.13) <.01 | -1.39(0.00) |
| a | Level \* education | 0.12 (0.11) .28 | 0.12 (0.11) .28 | 0.12(0.00) |
| a | Level \* height | 59.34 (7.27) <.01 | 59.29 (7.27) <.01 | 59.32(0.03) |
| a | Level \* smoking | 0.29 (1.12) .79 | 0.29 (1.12) .79 | 0.29(0.00) |
| a | Level \* cardio | 1.46 (1.20) .22 | 1.46 (1.20) .22 | 1.46(0.00) |
| a | Level \* diabetes | -2.96 (1.76) .09 | -2.96 (1.76) .09 | -2.96(0.00) |
| a | Slope \* age | -0.03 (0.03) .35 | -0.03 (0.03) .35 | -0.03(0.00) |
| a | Slope \* education | 0.00 (0.02) .99 | 0.00 (0.02) .97 | 0.00(0.00) |
| a | Slope \* height | -0.66 (1.65) .69 | -0.66 (1.65) .69 | -0.66(0.00) |
| a | Slope \* smoking | -0.13 (0.25) .61 | -0.13 (0.25) .60 | -0.13(0.00) |
| a | Slope \* cardio | 0.02 (0.25) .92 | 0.03 (0.25) .91 | 0.03(0.00) |
| a | Slope \* diabetes | -0.37 (0.38) .34 | -0.36 (0.38) .35 | -0.36(0.01) |
| b | Level | 91.35 (0.32) <.01 | 27.75 (0.13) <.01 | --- |
| b | Slope | -0.57 (0.15) <.01 | -0.22 (0.06) <.01 | --- |
| b | Level \* age | -0.15 (0.03) <.01 | -0.05 (0.01) <.01 | --- |
| b | Level \* education | 0.43 (0.03) <.01 | 0.08 (0.01) <.01 | --- |
| b | Level \* height | 6.70 (1.99) <.01 | 2.00 (0.73) .01 | --- |
| b | Level \* smoking | 0.19 (0.29) .52 | 0.09 (0.11) .40 | --- |
| b | Level \* cardio | 0.36 (0.32) .26 | 0.10 (0.11) .39 | --- |
| b | Level \* diabetes | 0.10 (0.41) .80 | 0.00 (0.15) .99 | --- |
| b | Slope \* age | -0.04 (0.02) <.01 | -0.01 (0.01) .07 | --- |
| b | Slope \* education | 0.03 (0.01) .01 | 0.01 (0.00) .02 | --- |
| b | Slope \* height | 1.62 (0.87) .06 | 0.08 (0.37) .82 | --- |
| b | Slope \* smoking | -0.18 (0.13) .17 | -0.07 (0.05) .20 | --- |
| b | Slope \* cardio | 0.15 (0.14) .28 | 0.04 (0.06) .50 | --- |
| b | Slope \* diabetes | -0.26 (0.19) .17 | 0.03 (0.08) .70 | --- |
| a | Var (Level) | 201.61 (13.61) <.01 | 201.47 (13.60) <.01 | 201.54(0.10) |
| a | Var (Slope) | 1.93 (0.89) .03 | 1.88 (0.89) .03 | 1.91(0.03) |
| a | Var (Residual) | 36.05 (2.48) <.01 | 36.12 (2.48) <.01 | 36.08(0.05) |
| a | Covar (Level, Slope) | -2.85 (2.29) .21 | -2.75 (2.28) .23 | -2.80(0.07) |
| b | Var (Level) | 8.82 (1.00) <.01 | 0.78 (0.14) <.01 | --- |
| b | Var (Slope) | 0.71 (0.31) .02 | 0.10 (0.04) .01 | --- |
| b | Var (Residual) | 11.28 (0.57) <.01 | 1.86 (0.09) <.01 | --- |
| b | Covar (Level, Slope) | 2.33 (0.37) <.01 | 0.21 (0.05) <.01 | --- |
| ab | Covar (Levels) | 5.49 (2.04) .01 | 2.28 (0.74) <.01 | --- |
| ab | Covar (Slopes) | 0.33 (0.23) .16 | 0.13 (0.11) .23 | --- |
| ab | Covar (Residuals) | -0.71 (0.47) .13 | 0.02 (0.22) .92 | --- |
|  | Correlation of Levels | 0.130 | 0.1818 | 0.16(0.04) |
|  | Correlation of Slopes | 0.280 | 0.2988 | 0.29(0.01) |
|  | Correlation of Residuals | -0.035 | 0.0026 | -0.02(0.03) |
|  | N | 847 | 847 | 847.00(0.00) |
|  | occasions | 4 | 4 | 4.00(0.00) |
|  | parameters | NA | NA | --- |
|  | LL | -19,408 | -16,557 | -1.798228e+04(2,016) |
|  | AIC | 38,898 | 33,195 | 3.604656e+04(4,032) |
|  | BIC | 39,092 | 33,390 | 3.624097e+04(4,032) |

## mmms

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

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| process | label | a | aeh | aehplus |
| a | Level | 79.89 (0.79) <.01 | 81.11 (0.97) <.01 | 80.95 (1.32) <.01 |
| a | Slope | -2.48 (0.16) <.01 | -2.50 (0.23) <.01 | -2.39 (0.29) <.01 |
| a | Level \* age | -1.50 (0.13) <.01 | -1.39 (0.13) <.01 | -1.39 (0.13) <.01 |
| a | Level \* education | --- | 0.12 (0.11) .29 | 0.12 (0.11) .28 |
| a | Level \* height | --- | 58.66 (7.31) <.01 | 59.34 (7.27) <.01 |
| a | Level \* smoking | --- | --- | 0.29 (1.12) .79 |
| a | Level \* cardio | --- | --- | 1.46 (1.20) .22 |
| a | Level \* diabetes | --- | --- | -2.96 (1.76) .09 |
| a | Slope \* age | -0.03 (0.03) .32 | -0.03 (0.03) .30 | -0.03 (0.03) .35 |
| a | Slope \* education | --- | 0.00 (0.02) .98 | 0.00 (0.02) .99 |
| a | Slope \* height | --- | -0.75 (1.65) .65 | -0.66 (1.65) .69 |
| a | Slope \* smoking | --- | --- | -0.13 (0.25) .61 |
| a | Slope \* cardio | --- | --- | 0.02 (0.25) .92 |
| a | Slope \* diabetes | --- | --- | -0.37 (0.38) .34 |
| b | Level | 93.61 (0.22) <.01 | 91.57 (0.26) <.01 | 91.35 (0.32) <.01 |
| b | Slope | -0.56 (0.07) <.01 | -0.69 (0.11) <.01 | -0.57 (0.15) <.01 |
| b | Level \* age | -0.19 (0.04) <.01 | -0.14 (0.03) <.01 | -0.15 (0.03) <.01 |
| b | Level \* education | --- | 0.43 (0.03) <.01 | 0.43 (0.03) <.01 |
| b | Level \* height | --- | 6.61 (1.98) <.01 | 6.70 (1.99) <.01 |
| b | Level \* smoking | --- | --- | 0.19 (0.29) .52 |
| b | Level \* cardio | --- | --- | 0.36 (0.32) .26 |
| b | Level \* diabetes | --- | --- | 0.10 (0.41) .80 |
| b | Slope \* age | -0.05 (0.02) <.01 | -0.05 (0.02) <.01 | -0.04 (0.02) <.01 |
| b | Slope \* education | --- | 0.03 (0.01) .01 | 0.03 (0.01) .01 |
| b | Slope \* height | --- | 1.50 (0.89) .09 | 1.62 (0.87) .06 |
| b | Slope \* smoking | --- | --- | -0.18 (0.13) .17 |
| b | Slope \* cardio | --- | --- | 0.15 (0.14) .28 |
| b | Slope \* diabetes | --- | --- | -0.26 (0.19) .17 |
| a | Var (Level) | 219.36 (14.01) <.01 | 202.81 (13.59) <.01 | 201.61 (13.61) <.01 |
| a | Var (Slope) | 1.96 (0.90) .03 | 1.95 (0.89) .03 | 1.93 (0.89) .03 |
| a | Var (Residual) | 36.03 (2.47) <.01 | 36.06 (2.48) <.01 | 36.05 (2.48) <.01 |
| a | Covar (Level, Slope) | -2.96 (2.35) .21 | -2.80 (2.29) .22 | -2.85 (2.29) .21 |
| b | Var (Level) | 13.93 (1.11) <.01 | 8.84 (1.00) <.01 | 8.82 (1.00) <.01 |
| b | Var (Slope) | 0.71 (0.31) .02 | 0.72 (0.31) .02 | 0.71 (0.31) .02 |
| b | Var (Residual) | 11.38 (0.58) <.01 | 11.29 (0.57) <.01 | 11.28 (0.57) <.01 |
| b | Covar (Level, Slope) | 2.90 (0.39) <.01 | 2.34 (0.37) <.01 | 2.33 (0.37) <.01 |
| ab | Covar (Levels) | 9.91 (2.46) <.01 | 5.54 (2.05) .01 | 5.49 (2.04) .01 |
| ab | Covar (Slopes) | 0.34 (0.23) .15 | 0.34 (0.23) .15 | 0.33 (0.23) .16 |
| ab | Covar (Residuals) | -0.72 (0.47) .13 | -0.70 (0.47) .13 | -0.71 (0.47) .13 |
|  | Correlation of Levels | 0.179 | 0.131 | 0.130 |
|  | Correlation of Slopes | 0.284 | 0.283 | 0.280 |
|  | Correlation of Residuals | -0.035 | -0.035 | -0.035 |
|  | N | 851 | 847 | 847 |
|  | occasions | 4 | 4 | 4 |
|  | parameters | NA | NA | NA |
|  | LL | -19,588 | -19,414 | -19,408 |
|  | AIC | 39,219 | 38,887 | 38,898 |
|  | BIC | 39,318 | 39,024 | 39,092 |

## mmse

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

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| process | label | a | aeh | aehplus |
| a | Level | 79.89 (0.79) <.01 | 81.10 (0.97) <.01 | 80.95 (1.32) <.01 |
| a | Slope | -2.47 (0.16) <.01 | -2.51 (0.23) <.01 | -2.39 (0.29) <.01 |
| a | Level \* age | -1.50 (0.13) <.01 | -1.39 (0.13) <.01 | -1.39 (0.13) <.01 |
| a | Level \* education | --- | 0.12 (0.11) .29 | 0.12 (0.11) .28 |
| a | Level \* height | --- | 58.61 (7.31) <.01 | 59.29 (7.27) <.01 |
| a | Level \* smoking | --- | --- | 0.29 (1.12) .79 |
| a | Level \* cardio | --- | --- | 1.46 (1.20) .22 |
| a | Level \* diabetes | --- | --- | -2.96 (1.76) .09 |
| a | Slope \* age | -0.03 (0.03) .32 | -0.03 (0.03) .31 | -0.03 (0.03) .35 |
| a | Slope \* education | --- | 0.00 (0.02) .95 | 0.00 (0.02) .97 |
| a | Slope \* height | --- | -0.75 (1.65) .65 | -0.66 (1.65) .69 |
| a | Slope \* smoking | --- | --- | -0.13 (0.25) .60 |
| a | Slope \* cardio | --- | --- | 0.03 (0.25) .91 |
| a | Slope \* diabetes | --- | --- | -0.36 (0.38) .35 |
| b | Level | 28.22 (0.07) <.01 | 27.83 (0.10) <.01 | 27.75 (0.13) <.01 |
| b | Slope | -0.19 (0.03) <.01 | -0.25 (0.05) <.01 | -0.22 (0.06) <.01 |
| b | Level \* age | -0.06 (0.01) <.01 | -0.05 (0.01) <.01 | -0.05 (0.01) <.01 |
| b | Level \* education | --- | 0.08 (0.01) <.01 | 0.08 (0.01) <.01 |
| b | Level \* height | --- | 1.98 (0.74) .01 | 2.00 (0.73) .01 |
| b | Level \* smoking | --- | --- | 0.09 (0.11) .40 |
| b | Level \* cardio | --- | --- | 0.10 (0.11) .39 |
| b | Level \* diabetes | --- | --- | 0.00 (0.15) .99 |
| b | Slope \* age | -0.01 (0.01) .04 | -0.01 (0.01) .07 | -0.01 (0.01) .07 |
| b | Slope \* education | --- | 0.01 (0.00) .02 | 0.01 (0.00) .02 |
| b | Slope \* height | --- | 0.06 (0.37) .88 | 0.08 (0.37) .82 |
| b | Slope \* smoking | --- | --- | -0.07 (0.05) .20 |
| b | Slope \* cardio | --- | --- | 0.04 (0.06) .50 |
| b | Slope \* diabetes | --- | --- | 0.03 (0.08) .70 |
| a | Var (Level) | 219.20 (14.01) <.01 | 202.65 (13.58) <.01 | 201.47 (13.60) <.01 |
| a | Var (Slope) | 1.89 (0.89) .03 | 1.90 (0.89) .03 | 1.88 (0.89) .03 |
| a | Var (Residual) | 36.13 (2.48) <.01 | 36.13 (2.48) <.01 | 36.12 (2.48) <.01 |
| a | Covar (Level, Slope) | -2.82 (2.33) .23 | -2.68 (2.28) .24 | -2.75 (2.28) .23 |
| b | Var (Level) | 1.01 (0.15) <.01 | 0.78 (0.14) <.01 | 0.78 (0.14) <.01 |
| b | Var (Slope) | 0.10 (0.04) .01 | 0.10 (0.04) .01 | 0.10 (0.04) .01 |
| b | Var (Residual) | 1.86 (0.09) <.01 | 1.86 (0.09) <.01 | 1.86 (0.09) <.01 |
| b | Covar (Level, Slope) | 0.24 (0.06) <.01 | 0.21 (0.05) <.01 | 0.21 (0.05) <.01 |
| ab | Covar (Levels) | 3.38 (0.80) <.01 | 2.31 (0.74) <.01 | 2.28 (0.74) <.01 |
| ab | Covar (Slopes) | 0.13 (0.11) .25 | 0.13 (0.11) .25 | 0.13 (0.11) .23 |
| ab | Covar (Residuals) | 0.01 (0.22) .94 | 0.02 (0.22) .93 | 0.02 (0.22) .92 |
|  | Correlation of Levels | 0.2275 | 0.1835 | 0.1818 |
|  | Correlation of Slopes | 0.2928 | 0.2954 | 0.2988 |
|  | Correlation of Residuals | 0.0018 | 0.0024 | 0.0026 |
|  | N | 851 | 847 | 847 |
|  | occasions | 4 | 4 | 4 |
|  | parameters | NA | NA | NA |
|  | LL | -16,665 | -16,562 | -16,557 |
|  | AIC | 33,373 | 33,183 | 33,195 |
|  | BIC | 33,472 | 33,320 | 33,390 |

## Summary

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

Computed correlations:

label

process\_b

a

aeh

aehplus

Correlation of Levels

mmms

0.18

0.13

0.13

Correlation of Levels

mmse

0.23

0.18

0.18

label

process\_b

a

aeh

aehplus

Correlation of Slopes

mmms

0.28

0.28

0.28

Correlation of Slopes

mmse

0.29

0.30

0.30

label

process\_b

a

aeh

aehplus

Correlation of Residuals

mmms

-0.04

-0.03

-0.04

Correlation of Residuals

mmse

0.00

0.00

0.00

P-values for corresponding covariances:

label

process\_b

a

aeh

aehplus

Covariance of Levels

mmms

0.00

0.01

0.01

Covariance of Levels

mmse

0.00

0.00

0.00

label

process\_b

a

aeh

aehplus

Covariance of Slopes

mmms

0.15

0.15

0.16

Covariance of Slopes

mmse

0.25

0.25

0.23

label

process\_b

a

aeh

aehplus

Covariance of Residuals

mmms

0.13

0.13

0.13

Covariance of Residuals

mmse

0.94

0.93

0.92

#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