EAS : Seed report

Date: 2016-12-29

Table of Contents

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

# Available models

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

|  |  |  |
| --- | --- | --- |
| process\_a | process\_b | n\_models |
| pef | block | 7 |
| pef | bnt | 2 |
| pef | categories | 2 |
| pef | digit\_tot | 9 |
| pef | fas | 2 |
| pef | logic\_tot | 2 |
| pef | mmse | 2 |
| pef | symbol | 10 |
| pef | trailsb | 9 |
| pef | waisvocab | 2 |
| pef | word\_im | 2 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| study\_name | subgroup | model\_type | process\_a | process\_b | n\_models |
| eas | female | a | pef | digit\_tot | 1 |
| eas | female | a | pef | symbol | 1 |
| eas | female | a | pef | trailsb | 1 |
| eas | female | ae | pef | block | 1 |
| eas | female | ae | pef | digit\_tot | 1 |
| eas | female | ae | pef | symbol | 1 |
| eas | female | ae | pef | trailsb | 1 |
| eas | female | aeh | pef | block | 1 |
| eas | female | aeh | pef | digit\_tot | 1 |
| eas | female | aeh | pef | symbol | 1 |
| eas | female | aeh | pef | trailsb | 1 |
| eas | female | aehplus | pef | block | 1 |
| eas | female | aehplus | pef | bnt | 1 |
| eas | female | aehplus | pef | categories | 1 |
| eas | female | aehplus | pef | digit\_tot | 1 |
| eas | female | aehplus | pef | fas | 1 |
| eas | female | aehplus | pef | logic\_tot | 1 |
| eas | female | aehplus | pef | mmse | 1 |
| eas | female | aehplus | pef | symbol | 1 |
| eas | female | aehplus | pef | trailsb | 1 |
| eas | female | aehplus | pef | waisvocab | 1 |
| eas | female | aehplus | pef | word\_im | 1 |
| eas | female | full | pef | block | 1 |
| eas | female | full | pef | symbol | 1 |
| eas | female | full | pef | trailsb | 1 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| study\_name | subgroup | model\_type | process\_a | process\_b | n\_models |
| eas | male | a | pef | digit\_tot | 1 |
| eas | male | a | pef | symbol | 1 |
| eas | male | ae | pef | block | 1 |
| eas | male | ae | pef | digit\_tot | 1 |
| eas | male | ae | pef | symbol | 1 |
| eas | male | ae | pef | trailsb | 1 |
| eas | male | aeh | pef | block | 1 |
| eas | male | aeh | pef | digit\_tot | 1 |
| eas | male | aeh | pef | symbol | 1 |
| eas | male | aeh | pef | trailsb | 1 |
| eas | male | aehplus | pef | block | 1 |
| eas | male | aehplus | pef | bnt | 1 |
| eas | male | aehplus | pef | categories | 1 |
| eas | male | aehplus | pef | digit\_tot | 1 |
| eas | male | aehplus | pef | fas | 1 |
| eas | male | aehplus | pef | logic\_tot | 1 |
| eas | male | aehplus | pef | mmse | 1 |
| eas | male | aehplus | pef | symbol | 1 |
| eas | male | aehplus | pef | trailsb | 1 |
| eas | male | aehplus | pef | waisvocab | 1 |
| eas | male | aehplus | pef | word\_im | 1 |
| eas | male | full | pef | digit\_tot | 1 |
| eas | male | full | pef | symbol | 1 |
| eas | male | full | pef | trailsb | 1 |

# female

Gender = *female*; Model type: *aehplus*; Process (a) = *pef*; Process (b): *block*, *bnt*, *categories*, *digit\_tot*, *fas*, *logic\_tot*, *mmse*, *symbol*, *trailsb*, *waisvocab*, *word\_im*

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| process | label | block | bnt | categories | digit\_tot | fas | logic\_tot | mmse | symbol | trailsb | waisvocab | word\_im | mean(sd) |
| ab | Covar (Levels) | 111.36 (44.87) .01 | 18.42 (10.03) .07 | 113.06 (39.02) <.01 | 23.08 (16.20) .15 | 130.95 (58.97) .03 | 35.38 (61.57) .57 | 11.91 (7.20) .10 | 199.81 (64.21) <.01 | -402.35 (273.61) .14 | 14.27 (50.35) .78 | 78.74 (26.90) <.01 | --- |
| ab | Covar (Slopes) | 2.73 (3.26) .40 | 0.17 (0.80) .83 | 2.35 (2.45) .34 | 1.63 (1.21) .18 | 0.96 (3.50) .78 | 2.85 (4.29) .51 | 0.06 (0.54) .92 | 7.93 (4.46) .08 | 9.47 (19.46) .63 | -7.35 (3.77) .05 | 3.12 (2.14) .14 | --- |
| ab | Covar (Residuals) | -2.02 (8.64) .81 | -3.29 (2.78) .24 | -15.48 (9.68) .11 | -1.79 (3.12) .57 | 5.01 (10.59) .64 | -7.57 (15.76) .63 | -0.36 (1.57) .82 | 4.83 (11.01) .66 | -24.99 (71.97) .73 | -8.95 (10.78) .41 | -5.33 (6.52) .41 | --- |
| er | Corr (Levels) | 0.25 (0.10) .01 | 0.17 (0.09) .06 | 0.26 (0.09) <.01 | 0.13 (0.09) .15 | 0.19 (0.08) .02 | 0.07 (0.12) .57 | 0.18 (0.10) .09 | 0.26 (0.08) <.01 | -0.13 (0.09) .12 | 0.03 (0.09) .78 | 0.29 (0.10) <.01 | --- |
| er | Corr (Slopes) | 0.31 (0.36) .40 | 0.16 (0.81) .84 | 0.53 (0.74) .47 | 0.44 (0.31) .15 | 0.10 (0.38) .79 | 0.30 (0.46) .51 | 0.07 (0.73) .92 | 0.46 (0.25) .07 | 0.28 (0.66) .66 | -0.70 (0.40) .08 | 0.64 (0.53) .23 | --- |
| er | Corr (Residuals) | -0.01 (0.05) .81 | -0.06 (0.05) .24 | -0.09 (0.06) .10 | -0.03 (0.05) .57 | 0.02 (0.05) .64 | -0.03 (0.07) .63 | -0.01 (0.05) .82 | 0.02 (0.05) .66 | -0.02 (0.05) .73 | -0.04 (0.05) .41 | -0.04 (0.05) .41 | --- |
| a | Level | 278.83 (13.23) <.01 | 278.88 (13.33) <.01 | 280.47 (13.22) <.01 | 276.92 (13.31) <.01 | 279.58 (13.36) <.01 | 393.52 (31.82) <.01 | 278.78 (13.18) <.01 | 276.33 (13.35) <.01 | 278.83 (13.33) <.01 | 278.94 (13.23) <.01 | 279.27 (13.19) <.01 | 289.12(34.64) |
| a | Slope | -7.51 (4.26) .08 | -7.63 (4.30) .08 | -8.30 (4.33) .06 | -6.65 (4.36) .13 | -7.86 (4.25) .06 | -7.07 (9.95) .48 | -7.38 (4.15) .07 | -6.79 (4.31) .12 | -7.37 (4.25) .08 | -7.78 (4.20) .06 | -7.51 (4.20) .07 | -7.44(0.48) |
| a | Level \* age | -2.57 (0.88) <.01 | -2.50 (0.89) <.01 | -2.56 (0.89) <.01 | -2.47 (0.88) <.01 | -2.57 (0.88) <.01 | -2.53 (1.81) .16 | -2.52 (0.87) <.01 | -2.45 (0.88) <.01 | -2.59 (0.89) <.01 | -2.55 (0.87) <.01 | -2.46 (0.87) <.01 | -2.52(0.05) |
| a | Level \* education | 2.15 (1.28) .09 | 2.19 (1.29) .09 | 2.09 (1.27) .10 | 2.31 (1.28) .07 | 2.19 (1.29) .09 | 3.10 (2.72) .25 | 2.24 (1.29) .08 | 2.12 (1.29) .10 | 2.22 (1.27) .08 | 2.25 (1.27) .08 | 2.21 (1.30) .09 | 2.28(0.28) |
| a | Level \* height | 1.34 (0.63) .03 | 1.36 (0.64) .04 | 1.40 (0.64) .03 | 1.37 (0.62) .03 | 1.37 (0.64) .03 | 0.61 (1.30) .64 | 1.37 (0.63) .03 | 1.40 (0.64) .03 | 1.35 (0.64) .04 | 1.36 (0.63) .03 | 1.38 (0.63) .03 | 1.30(0.23) |
| a | Level \* smoking | -3.53 (8.33) .67 | -3.51 (8.44) .68 | -3.49 (8.34) .68 | -2.71 (8.24) .74 | -3.39 (8.20) .68 | -21.68 (19.08) .26 | -3.48 (8.09) .67 | -2.60 (8.25) .75 | -3.00 (8.44) .72 | -3.83 (8.18) .64 | -3.70 (8.34) .66 | -4.99(5.55) |
| a | Level \* cardio | -4.15 (12.28) .73 | -2.81 (12.38) .82 | -2.30 (12.35) .85 | -3.48 (12.31) .78 | -1.93 (12.48) .88 | -21.95 (24.80) .38 | -3.09 (12.41) .80 | -3.11 (12.48) .80 | -3.71 (12.22) .76 | -2.10 (12.29) .86 | -3.60 (12.36) .77 | -4.75(5.75) |
| a | Level \* diabetes | -28.47 (10.39) .01 | -27.00 (10.47) .01 | -28.00 (10.61) .01 | -27.47 (10.35) .01 | -28.19 (10.36) .01 | -10.76 (21.27) .61 | -28.66 (10.46) .01 | -28.02 (10.56) .01 | -28.05 (10.56) .01 | -27.69 (10.49) .01 | -28.41 (10.43) .01 | -26.43(5.22) |
| a | Slope \* age | -0.30 (0.28) .28 | -0.32 (0.29) .26 | -0.30 (0.28) .29 | -0.35 (0.28) .22 | -0.29 (0.28) .30 | -0.58 (0.55) .29 | -0.32 (0.28) .25 | -0.35 (0.29) .22 | -0.30 (0.29) .30 | -0.28 (0.28) .32 | -0.35 (0.28) .22 | -0.34(0.08) |
| a | Slope \* education | -0.40 (0.40) .32 | -0.41 (0.41) .32 | -0.38 (0.41) .36 | -0.48 (0.42) .25 | -0.43 (0.41) .30 | -0.40 (0.78) .61 | -0.44 (0.41) .28 | -0.38 (0.42) .36 | -0.44 (0.40) .28 | -0.44 (0.40) .28 | -0.45 (0.41) .27 | -0.42(0.03) |
| a | Slope \* height | 0.13 (0.21) .53 | 0.12 (0.22) .58 | 0.09 (0.21) .65 | 0.10 (0.21) .64 | 0.11 (0.21) .61 | 0.90 (0.46) .05 | 0.12 (0.21) .55 | 0.08 (0.22) .72 | 0.11 (0.22) .61 | 0.12 (0.21) .56 | 0.11 (0.21) .59 | 0.18(0.24) |
| a | Slope \* smoking | -0.11 (2.60) .97 | -0.04 (2.71) .99 | 0.01 (2.64) .99 | -0.49 (2.69) .86 | -0.06 (2.62) .98 | 2.12 (5.73) .71 | -0.14 (2.50) .95 | -0.40 (2.65) .88 | -0.24 (2.68) .93 | 0.08 (2.68) .98 | -0.02 (2.54) .99 | 0.06(0.70) |
| a | Slope \* cardio | -1.19 (4.34) .78 | -1.44 (4.24) .73 | -1.61 (4.32) .71 | -1.61 (4.30) .71 | -1.81 (4.60) .69 | 7.82 (9.24) .40 | -1.54 (4.39) .73 | -1.47 (4.51) .74 | -1.34 (4.37) .76 | -1.62 (4.30) .71 | -1.18 (4.33) .78 | -0.64(2.81) |
| a | Slope \* diabetes | 4.34 (3.30) .19 | 3.73 (3.31) .26 | 3.89 (3.38) .25 | 3.96 (3.23) .22 | 4.19 (3.35) .21 | -2.44 (6.93) .72 | 4.35 (3.40) .20 | 4.36 (3.35) .19 | 4.20 (3.42) .22 | 3.96 (3.26) .22 | 4.15 (3.36) .22 | 3.52(1.99) |
| b | Level | 16.43 (1.35) <.01 | 10.25 (0.34) <.01 | 35.83 (1.30) <.01 | 12.29 (0.50) <.01 | 23.56 (1.81) <.01 | 16.26 (1.50) <.01 | 25.62 (0.21) <.01 | 37.12 (2.08) <.01 | 173.97 (9.30) <.01 | 32.88 (1.67) <.01 | 32.62 (0.90) <.01 | --- |
| b | Slope | 1.02 (0.37) <.01 | 0.00 (0.10) .99 | -0.08 (0.34) .82 | 0.23 (0.14) .09 | 1.19 (0.41) <.01 | 1.26 (0.39) <.01 | 0.15 (0.06) .01 | 1.38 (0.50) .01 | 0.26 (2.40) .91 | 0.04 (0.47) .94 | 0.38 (0.26) .15 | --- |
| b | Level \* age | -0.12 (0.08) .17 | -0.02 (0.02) .37 | -0.26 (0.08) <.01 | -0.03 (0.03) .40 | 0.02 (0.12) .87 | -0.04 (0.08) .58 | -0.00 (0.01) .86 | -0.37 (0.13) <.01 | 2.11 (0.61) <.01 | 0.01 (0.11) .96 | -0.20 (0.05) <.01 | --- |
| b | Level \* education | 0.85 (0.12) <.01 | 0.24 (0.04) <.01 | 0.76 (0.12) <.01 | 0.28 (0.05) <.01 | 1.46 (0.17) <.01 | 0.56 (0.12) <.01 | 0.11 (0.02) <.01 | 1.57 (0.20) <.01 | -7.32 (0.95) <.01 | 1.75 (0.17) <.01 | 0.22 (0.09) .01 | --- |
| b | Level \* height | 0.03 (0.06) .63 | 0.00 (0.02) .78 | -0.05 (0.06) .44 | 0.05 (0.03) .05 | -0.12 (0.09) .20 | 0.05 (0.07) .45 | 0.01 (0.01) .54 | 0.07 (0.11) .53 | 0.24 (0.43) .58 | 0.06 (0.07) .41 | 0.02 (0.04) .63 | --- |
| b | Level \* smoking | 1.72 (0.80) .03 | 0.55 (0.20) .01 | 1.82 (0.71) .01 | 0.94 (0.20) <.01 | 3.56 (0.98) <.01 | 1.52 (0.90) .09 | 0.27 (0.13) .04 | 3.32 (1.08) <.01 | -15.93 (5.43) <.01 | 1.80 (0.82) .03 | -0.38 (0.51) .46 | --- |
| b | Level \* cardio | 0.46 (1.45) .75 | 0.33 (0.41) .43 | 1.77 (1.46) .22 | -0.97 (0.51) .06 | 0.24 (1.98) .90 | 1.47 (1.03) .15 | -0.02 (0.22) .92 | -4.43 (2.76) .11 | 4.70 (9.87) .63 | 2.79 (1.67) .10 | 1.12 (0.98) .25 | --- |
| b | Level \* diabetes | -3.41 (1.12) <.01 | -0.99 (0.26) <.01 | -4.41 (0.99) <.01 | -0.66 (0.43) .12 | -3.49 (1.46) .02 | -0.73 (0.99) .46 | -0.29 (0.17) .08 | -4.38 (1.60) .01 | 23.75 (7.74) <.01 | -3.81 (1.25) <.01 | -1.58 (0.71) .03 | --- |
| b | Slope \* age | -0.03 (0.02) .17 | -0.01 (0.01) .06 | -0.04 (0.02) .02 | -0.00 (0.01) .85 | -0.07 (0.03) .01 | -0.10 (0.03) <.01 | -0.00 (0.00) .60 | -0.10 (0.03) <.01 | 0.01 (0.19) .94 | -0.03 (0.03) .30 | -0.02 (0.02) .16 | --- |
| b | Slope \* education | -0.03 (0.04) .35 | 0.01 (0.01) .52 | 0.04 (0.03) .20 | -0.01 (0.01) .61 | -0.00 (0.04) .99 | -0.07 (0.03) .05 | -0.01 (0.01) .10 | -0.04 (0.04) .36 | 0.14 (0.24) .54 | 0.01 (0.04) .79 | -0.02 (0.03) .37 | --- |
| b | Slope \* height | -0.00 (0.02) .96 | 0.00 (0.01) .64 | 0.02 (0.02) .31 | -0.01 (0.01) .10 | 0.02 (0.02) .39 | -0.01 (0.02) .71 | -0.00 (0.00) .59 | -0.04 (0.03) .18 | -0.16 (0.14) .25 | -0.01 (0.02) .70 | -0.00 (0.01) .76 | --- |
| b | Slope \* smoking | -0.17 (0.17) .33 | -0.00 (0.06) .99 | -0.17 (0.19) .37 | -0.07 (0.07) .33 | -0.14 (0.24) .57 | -0.22 (0.25) .38 | -0.02 (0.04) .61 | 0.06 (0.27) .83 | -0.27 (1.82) .88 | -0.00 (0.27) .99 | 0.08 (0.14) .57 | --- |
| b | Slope \* cardio | 0.01 (0.37) .97 | 0.07 (0.12) .54 | -0.03 (0.36) .94 | 0.22 (0.15) .13 | -0.58 (0.37) .12 | 0.10 (0.29) .73 | -0.08 (0.06) .19 | 0.58 (0.49) .24 | -1.13 (2.60) .66 | -0.38 (0.50) .44 | -0.10 (0.29) .73 | --- |
| b | Slope \* diabetes | 0.16 (0.29) .57 | -0.01 (0.08) .86 | 0.21 (0.24) .38 | 0.04 (0.11) .74 | -0.12 (0.31) .69 | 0.54 (0.31) .08 | 0.02 (0.05) .73 | -0.76 (0.37) .04 | -0.34 (2.47) .89 | -0.29 (0.36) .41 | -0.06 (0.19) .76 | --- |
| a | Var (Level) | 3842.12 (483.39) <.01 | 3876.99 (497.36) <.01 | 3886.63 (490.50) <.01 | 3857.85 (494.25) <.01 | 3891.61 (500.48) <.01 | 11038.95 (2173.96) <.01 | 3867.01 (499.29) <.01 | 3985.97 (501.94) <.01 | 3908.94 (515.18) <.01 | 3937.79 (499.15) <.01 | 3930.10 (488.24) <.01 | 4547.63(2153.32) |
| a | Var (Slope) | 144.63 (49.31) <.01 | 142.12 (51.71) .01 | 144.51 (50.28) <.01 | 145.68 (49.32) <.01 | 142.91 (49.88) <.01 | 307.58 (119.55) .01 | 140.99 (50.63) <.01 | 167.08 (52.77) <.01 | 150.14 (50.26) <.01 | 148.59 (49.17) <.01 | 148.55 (48.94) <.01 | 162.07(48.78) |
| a | Var (Residual) | 1607.71 (78.88) <.01 | 1600.23 (79.92) <.01 | 1603.17 (79.02) <.01 | 1599.25 (77.93) <.01 | 1600.01 (78.76) <.01 | 3639.96 (203.23) <.01 | 1601.74 (79.44) <.01 | 1586.16 (79.85) <.01 | 1596.33 (78.89) <.01 | 1593.99 (78.22) <.01 | 1584.02 (75.11) <.01 | 1782.96(615.94) |
| b | Var (Level) | 52.12 (4.91) <.01 | 3.08 (0.40) <.01 | 49.26 (4.95) <.01 | 7.64 (0.72) <.01 | 122.89 (10.84) <.01 | 25.64 (4.22) <.01 | 1.18 (0.14) <.01 | 146.25 (12.94) <.01 | 2341.27 (327.25) <.01 | 75.57 (8.39) <.01 | 18.82 (2.16) <.01 | --- |
| b | Var (Slope) | 0.54 (0.30) .07 | 0.01 (0.02) .74 | 0.14 (0.25) .59 | 0.10 (0.04) .02 | 0.62 (0.39) .11 | 0.30 (0.27) .27 | 0.00 (0.01) .62 | 1.79 (0.44) <.01 | 7.36 (14.63) .61 | 0.75 (0.38) .05 | 0.16 (0.16) .33 | --- |
| b | Var (Residual) | 19.72 (0.88) <.01 | 1.84 (0.08) <.01 | 18.33 (0.81) <.01 | 2.79 (0.13) <.01 | 24.63 (1.14) <.01 | 14.66 (0.97) <.01 | 0.72 (0.03) <.01 | 28.77 (1.26) <.01 | 1447.09 (50.15) <.01 | 32.98 (1.46) <.01 | 10.99 (0.55) <.01 | --- |
| a | Covar (Level, Slope) | -312.29 (147.38) .03 | -310.15 (152.45) .04 | -318.28 (148.70) .03 | -308.66 (150.02) .04 | -313.81 (150.31) .04 | -981.30 (507.34) .05 | -306.85 (150.44) .04 | -375.02 (155.60) .02 | -330.71 (152.30) .03 | -330.85 (148.04) .02 | -323.34 (148.40) .03 | -382.84(199.41) |
| b | Covar (Level, Slope) | -1.57 (1.09) .15 | 0.05 (0.09) .56 | 1.36 (1.01) .18 | -0.28 (0.14) .05 | -1.99 (1.81) .27 | -0.50 (1.04) .63 | -0.02 (0.03) .37 | -7.16 (2.16) <.01 | 25.01 (66.26) .71 | -2.72 (1.62) .09 | 0.28 (0.61) .64 | --- |
|  | Correlation of Levels | 0.249 | 0.17 | 0.26 | 0.134 | 0.189 | 0.067 | 0.176 | 0.262 | -0.133 | 0.026 | 0.29 | 0.15(0.13) |
|  | Correlation of Slopes | 0.308 | 0.16 | 0.53 | 0.438 | 0.102 | 0.297 | 0.073 | 0.459 | 0.285 | -0.698 | 0.64 | 0.24(0.36) |
|  | Correlation of Residuals | -0.011 | -0.06 | -0.09 | -0.027 | 0.025 | -0.033 | -0.011 | 0.023 | -0.016 | -0.039 | -0.04 | -0.03(0.03) |
|  | N | 545 | 545 | 545 | 545 | 545 | 324 | 545 | 545 | 545 | 545 | 545 | 524.91(66.63) |
|  | occasions | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5.00(0.00) |
|  | parameters | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43.00(0.00) |
|  | LL | -13,996 | -11,893 | -13,936 | -12,349 | -14,301 | -8,634 | -11,080 | -14,480 | -17,497 | -14,388 | -13,461 | -1.327406e+04(2,273) |
|  | AIC | 28,077 | 23,871 | 27,959 | 24,783 | 28,687 | 17,355 | 22,247 | 29,046 | 35,081 | 28,862 | 27,008 | 2.663411e+04(4,547) |
|  | BIC | 28,262 | 24,056 | 28,144 | 24,968 | 28,872 | 17,517 | 22,432 | 29,231 | 35,265 | 29,046 | 27,193 | 2.681702e+04(4,551) |

## block

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

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| process | label | ae | aeh | aehplus | full |
| ab | Covar (Levels) | 98.99 (49.69) .05 | 104.78 (52.19) .04 | 111.36 (44.87) .01 | 88.17 (79.03) .26 |
| ab | Covar (Slopes) | 3.73 (1.23) <.01 | 0.21 (1.09) .85 | 2.73 (3.26) .40 | 0.44 (2.21) .84 |
| ab | Covar (Residuals) | -0.39 (9.43) .97 | -1.25 (10.27) .90 | -2.02 (8.64) .81 | 0.44 (16.60) .98 |
| er | Corr (Levels) | --- | --- | 0.25 (0.10) .01 | --- |
| er | Corr (Slopes) | --- | --- | 0.31 (0.36) .40 | --- |
| er | Corr (Residuals) | --- | --- | -0.01 (0.05) .81 | --- |
| a | Level | 310.35 (17.37) <.01 | 333.07 (17.93) <.01 | 278.83 (13.23) <.01 | 339.07 (26.69) <.01 |
| a | Slope | -10.71 (4.20) .01 | -26.73 (4.00) <.01 | -7.51 (4.26) .08 | -26.99 (7.29) <.01 |
| a | Level \* age | -4.09 (1.22) <.01 | -4.25 (1.29) <.01 | -2.57 (0.88) <.01 | -4.40 (1.80) .01 |
| a | Level \* education | 0.89 (1.78) .62 | -1.60 (1.88) .39 | 2.15 (1.28) .09 | -2.11 (2.71) .44 |
| a | Level \* height | --- | 0.55 (0.85) .52 | 1.34 (0.63) .03 | 0.32 (1.30) .81 |
| a | Level \* smoking | --- | --- | -3.53 (8.33) .67 | -0.33 (13.19) .98 |
| a | Level \* cardio | --- | --- | -4.15 (12.28) .73 | -22.61 (36.18) .53 |
| a | Level \* diabetes | --- | --- | -28.47 (10.39) .01 | -27.79 (25.94) .28 |
| a | Slope \* age | -0.24 (0.26) .35 | 0.19 (0.26) .46 | -0.30 (0.28) .28 | 0.19 (0.42) .64 |
| a | Slope \* education | -0.40 (0.41) .33 | 0.60 (0.45) .19 | -0.40 (0.40) .32 | 0.74 (0.76) .33 |
| a | Slope \* height | --- | 0.55 (0.20) .01 | 0.13 (0.21) .53 | 0.64 (0.29) .02 |
| a | Slope \* smoking | --- | --- | -0.11 (2.60) .97 | 1.88 (3.05) .54 |
| a | Slope \* cardio | --- | --- | -1.19 (4.34) .78 | 2.31 (10.17) .82 |
| a | Slope \* diabetes | --- | --- | 4.34 (3.30) .19 | -0.18 (9.68) .98 |
| b | Level | 13.93 (0.95) <.01 | 18.43 (1.90) <.01 | 16.43 (1.35) <.01 | 19.33 (2.75) <.01 |
| b | Slope | 1.12 (0.20) <.01 | 0.73 (0.37) .05 | 1.02 (0.37) <.01 | 0.73 (0.49) .14 |
| b | Level \* age | -0.16 (0.07) .02 | -0.12 (0.15) .41 | -0.12 (0.08) .17 | -0.14 (0.16) .39 |
| b | Level \* education | 1.06 (0.11) <.01 | 0.92 (0.21) <.01 | 0.85 (0.12) <.01 | 0.88 (0.26) <.01 |
| b | Level \* height | --- | -0.01 (0.09) .89 | 0.03 (0.06) .63 | -0.01 (0.11) .96 |
| b | Level \* smoking | --- | --- | 1.72 (0.80) .03 | 1.51 (1.45) .30 |
| b | Level \* cardio | --- | --- | 0.46 (1.45) .75 | -0.29 (2.93) .92 |
| b | Level \* diabetes | --- | --- | -3.41 (1.12) <.01 | -4.30 (2.58) .10 |
| b | Slope \* age | -0.03 (0.01) .04 | -0.04 (0.02) .10 | -0.03 (0.02) .17 | -0.04 (0.03) .17 |
| b | Slope \* education | -0.08 (0.02) <.01 | -0.07 (0.04) .09 | -0.03 (0.04) .35 | -0.07 (0.05) .18 |
| b | Slope \* height | --- | -0.01 (0.01) .48 | -0.00 (0.02) .96 | -0.01 (0.02) .63 |
| b | Slope \* smoking | --- | --- | -0.17 (0.17) .33 | -0.10 (0.28) .73 |
| b | Slope \* cardio | --- | --- | 0.01 (0.37) .97 | -0.07 (0.87) .94 |
| b | Slope \* diabetes | --- | --- | 0.16 (0.29) .57 | 0.16 (0.47) .73 |
| a | Var (Level) | 5212.32 (755.47) <.01 | 4780.41 (801.53) <.01 | 3842.12 (483.39) <.01 | 4629.68 (1058.37) <.01 |
| a | Var (Slope) | 119.91 (37.08) <.01 | 44.62 (31.72) .16 | 144.63 (49.31) <.01 | 38.91 (32.62) .23 |
| a | Var (Residual) | 1695.37 (386.98) <.01 | 1703.01 (503.91) <.01 | 1607.71 (78.88) <.01 | 1689.57 (104.83) <.01 |
| b | Var (Level) | 54.09 (4.90) <.01 | 51.46 (8.54) <.01 | 52.12 (4.91) <.01 | 46.15 (9.21) <.01 |
| b | Var (Slope) | 0.26 (0.11) .01 | 0.16 (0.14) .26 | 0.54 (0.30) .07 | 0.14 (0.24) .57 |
| b | Var (Residual) | 21.49 (1.14) <.01 | 19.77 (1.49) <.01 | 19.72 (0.88) <.01 | 19.77 (1.58) <.01 |
| a | Covar (Level, Slope) | -454.24 (161.68) <.01 | -312.88 (173.77) .07 | -312.29 (147.38) .03 | -307.89 (149.73) .04 |
| b | Covar (Level, Slope) | -2.10 (0.56) <.01 | -1.21 (0.93) .19 | -1.57 (1.09) .15 | -0.91 (1.46) .53 |
|  | Correlation of Levels | 0.186 | 0.2113 | 0.249 | 0.1907 |
|  | Correlation of Slopes | 0.671 | 0.0781 | 0.308 | 0.1912 |
|  | Correlation of Residuals | -0.002 | -0.0068 | -0.011 | 0.0024 |
|  | N | 563 | 150 | 545 | 150 |
|  | occasions | 9 | 8 | 5 | 8 |
|  | parameters | 25 | 29 | 43 | 45 |
|  | LL | -9,195 | -4,535 | -13,996 | -4,524 |
|  | AIC | 18,439 | 9,128 | 28,077 | 9,138 |
|  | BIC | 18,548 | 9,216 | 28,262 | 9,273 |

## bnt

Gender = *female*; Process (a) = *pef*; Process (b) = *bnt*

|  |  |  |
| --- | --- | --- |
| process | label | aehplus |
| ab | Covar (Levels) | 18.42 (10.03) .07 |
| ab | Covar (Slopes) | 0.17 (0.80) .83 |
| ab | Covar (Residuals) | -3.29 (2.78) .24 |
| er | Corr (Levels) | 0.17 (0.09) .06 |
| er | Corr (Slopes) | 0.16 (0.81) .84 |
| er | Corr (Residuals) | -0.06 (0.05) .24 |
| a | Level | 278.88 (13.33) <.01 |
| a | Slope | -7.63 (4.30) .08 |
| a | Level \* age | -2.50 (0.89) <.01 |
| a | Level \* education | 2.19 (1.29) .09 |
| a | Level \* height | 1.36 (0.64) .04 |
| a | Level \* smoking | -3.51 (8.44) .68 |
| a | Level \* cardio | -2.81 (12.38) .82 |
| a | Level \* diabetes | -27.00 (10.47) .01 |
| a | Slope \* age | -0.32 (0.29) .26 |
| a | Slope \* education | -0.41 (0.41) .32 |
| a | Slope \* height | 0.12 (0.22) .58 |
| a | Slope \* smoking | -0.04 (2.71) .99 |
| a | Slope \* cardio | -1.44 (4.24) .73 |
| a | Slope \* diabetes | 3.73 (3.31) .26 |
| b | Level | 10.25 (0.34) <.01 |
| b | Slope | 0.00 (0.10) .99 |
| b | Level \* age | -0.02 (0.02) .37 |
| b | Level \* education | 0.24 (0.04) <.01 |
| b | Level \* height | 0.00 (0.02) .78 |
| b | Level \* smoking | 0.55 (0.20) .01 |
| b | Level \* cardio | 0.33 (0.41) .43 |
| b | Level \* diabetes | -0.99 (0.26) <.01 |
| b | Slope \* age | -0.01 (0.01) .06 |
| b | Slope \* education | 0.01 (0.01) .52 |
| b | Slope \* height | 0.00 (0.01) .64 |
| b | Slope \* smoking | -0.00 (0.06) .99 |
| b | Slope \* cardio | 0.07 (0.12) .54 |
| b | Slope \* diabetes | -0.01 (0.08) .86 |
| a | Var (Level) | 3876.99 (497.36) <.01 |
| a | Var (Slope) | 142.12 (51.71) .01 |
| a | Var (Residual) | 1600.23 (79.92) <.01 |
| b | Var (Level) | 3.08 (0.40) <.01 |
| b | Var (Slope) | 0.01 (0.02) .74 |
| b | Var (Residual) | 1.84 (0.08) <.01 |
| a | Covar (Level, Slope) | -310.15 (152.45) .04 |
| b | Covar (Level, Slope) | 0.05 (0.09) .56 |
|  | Correlation of Levels | 0.17 |
|  | Correlation of Slopes | 0.16 |
|  | Correlation of Residuals | -0.06 |
|  | N | 545 |
|  | occasions | 5 |
|  | parameters | 43 |
|  | LL | -11,893 |
|  | AIC | 23,871 |
|  | BIC | 24,056 |

## categories

Gender = *female*; Process (a) = *pef*; Process (b) = *categories*

|  |  |  |
| --- | --- | --- |
| process | label | aehplus |
| ab | Covar (Levels) | 113.06 (39.02) <.01 |
| ab | Covar (Slopes) | 2.35 (2.45) .34 |
| ab | Covar (Residuals) | -15.48 (9.68) .11 |
| er | Corr (Levels) | 0.26 (0.09) <.01 |
| er | Corr (Slopes) | 0.53 (0.74) .47 |
| er | Corr (Residuals) | -0.09 (0.06) .10 |
| a | Level | 280.47 (13.22) <.01 |
| a | Slope | -8.30 (4.33) .06 |
| a | Level \* age | -2.56 (0.89) <.01 |
| a | Level \* education | 2.09 (1.27) .10 |
| a | Level \* height | 1.40 (0.64) .03 |
| a | Level \* smoking | -3.49 (8.34) .68 |
| a | Level \* cardio | -2.30 (12.35) .85 |
| a | Level \* diabetes | -28.00 (10.61) .01 |
| a | Slope \* age | -0.30 (0.28) .29 |
| a | Slope \* education | -0.38 (0.41) .36 |
| a | Slope \* height | 0.09 (0.21) .65 |
| a | Slope \* smoking | 0.01 (2.64) .99 |
| a | Slope \* cardio | -1.61 (4.32) .71 |
| a | Slope \* diabetes | 3.89 (3.38) .25 |
| b | Level | 35.83 (1.30) <.01 |
| b | Slope | -0.08 (0.34) .82 |
| b | Level \* age | -0.26 (0.08) <.01 |
| b | Level \* education | 0.76 (0.12) <.01 |
| b | Level \* height | -0.05 (0.06) .44 |
| b | Level \* smoking | 1.82 (0.71) .01 |
| b | Level \* cardio | 1.77 (1.46) .22 |
| b | Level \* diabetes | -4.41 (0.99) <.01 |
| b | Slope \* age | -0.04 (0.02) .02 |
| b | Slope \* education | 0.04 (0.03) .20 |
| b | Slope \* height | 0.02 (0.02) .31 |
| b | Slope \* smoking | -0.17 (0.19) .37 |
| b | Slope \* cardio | -0.03 (0.36) .94 |
| b | Slope \* diabetes | 0.21 (0.24) .38 |
| a | Var (Level) | 3886.63 (490.50) <.01 |
| a | Var (Slope) | 144.51 (50.28) <.01 |
| a | Var (Residual) | 1603.17 (79.02) <.01 |
| b | Var (Level) | 49.26 (4.95) <.01 |
| b | Var (Slope) | 0.14 (0.25) .59 |
| b | Var (Residual) | 18.33 (0.81) <.01 |
| a | Covar (Level, Slope) | -318.28 (148.70) .03 |
| b | Covar (Level, Slope) | 1.36 (1.01) .18 |
|  | Correlation of Levels | 0.26 |
|  | Correlation of Slopes | 0.53 |
|  | Correlation of Residuals | -0.09 |
|  | N | 545 |
|  | occasions | 5 |
|  | parameters | 43 |
|  | LL | -13,936 |
|  | AIC | 27,959 |
|  | BIC | 28,144 |

## digit\_tot

Gender = *female*; Process (a) = *pef*; Process (b) = *digit\_tot*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| process | label | a | ae | aeh | aehplus |
| ab | Covar (Levels) | 3.51 (31.06) .91 | -1.14 (29.85) .97 | -17.42 (25.92) .50 | 23.08 (16.20) .15 |
| ab | Covar (Slopes) | 1.22 (1.07) .25 | 1.09 (1.06) .30 | -0.75 (0.90) .40 | 1.63 (1.21) .18 |
| ab | Covar (Residuals) | 0.68 (3.87) .86 | 0.61 (3.87) .88 | 4.47 (6.59) .50 | -1.79 (3.12) .57 |
| er | Corr (Levels) | --- | --- | --- | 0.13 (0.09) .15 |
| er | Corr (Slopes) | --- | --- | --- | 0.44 (0.31) .15 |
| er | Corr (Residuals) | --- | --- | --- | -0.03 (0.05) .57 |
| a | Level | 317.52 (14.43) <.01 | 312.29 (21.04) <.01 | 335.31 (24.64) <.01 | 276.92 (13.31) <.01 |
| a | Slope | -12.73 (3.31) <.01 | -9.96 (5.25) .06 | -27.66 (5.42) <.01 | -6.65 (4.36) .13 |
| a | Level \* age | -3.97 (1.40) <.01 | -4.01 (1.42) <.01 | -4.40 (1.76) .01 | -2.47 (0.88) <.01 |
| a | Level \* education | --- | 0.90 (2.26) .69 | -1.64 (2.81) .56 | 2.31 (1.28) .07 |
| a | Level \* height | --- | --- | 0.54 (1.19) .65 | 1.37 (0.62) .03 |
| a | Level \* smoking | --- | --- | --- | -2.71 (8.24) .74 |
| a | Level \* cardio | --- | --- | --- | -3.48 (12.31) .78 |
| a | Level \* diabetes | --- | --- | --- | -27.47 (10.35) .01 |
| a | Slope \* age | -0.30 (0.36) .41 | -0.29 (0.36) .42 | 0.28 (0.42) .50 | -0.35 (0.28) .22 |
| a | Slope \* education | --- | -0.46 (0.62) .46 | 0.58 (0.70) .41 | -0.48 (0.42) .25 |
| a | Slope \* height | --- | --- | 0.56 (0.30) .06 | 0.10 (0.21) .64 |
| a | Slope \* smoking | --- | --- | --- | -0.49 (2.69) .86 |
| a | Slope \* cardio | --- | --- | --- | -1.61 (4.30) .71 |
| a | Slope \* diabetes | --- | --- | --- | 3.96 (3.23) .22 |
| b | Level | 13.52 (0.30) <.01 | 11.20 (0.41) <.01 | 13.40 (0.88) <.01 | 12.29 (0.50) <.01 |
| b | Slope | 0.25 (0.07) <.01 | 0.36 (0.11) <.01 | 0.20 (0.18) .27 | 0.23 (0.14) .09 |
| b | Level \* age | -0.04 (0.03) .21 | -0.03 (0.03) .28 | -0.07 (0.06) .29 | -0.03 (0.03) .40 |
| b | Level \* education | --- | 0.37 (0.04) <.01 | 0.29 (0.09) <.01 | 0.28 (0.05) <.01 |
| b | Level \* height | --- | --- | 0.03 (0.04) .56 | 0.05 (0.03) .05 |
| b | Level \* smoking | --- | --- | --- | 0.94 (0.20) <.01 |
| b | Level \* cardio | --- | --- | --- | -0.97 (0.51) .06 |
| b | Level \* diabetes | --- | --- | --- | -0.66 (0.43) .12 |
| b | Slope \* age | -0.01 (0.01) .27 | -0.01 (0.01) .26 | -0.01 (0.01) .32 | -0.00 (0.01) .85 |
| b | Slope \* education | --- | -0.02 (0.01) .12 | -0.02 (0.02) .41 | -0.01 (0.01) .61 |
| b | Slope \* height | --- | --- | -0.01 (0.01) .19 | -0.01 (0.01) .10 |
| b | Slope \* smoking | --- | --- | --- | -0.07 (0.07) .33 |
| b | Slope \* cardio | --- | --- | --- | 0.22 (0.15) .13 |
| b | Slope \* diabetes | --- | --- | --- | 0.04 (0.11) .74 |
| a | Var (Level) | 5464.40 (916.46) <.01 | 5443.31 (927.60) <.01 | 4799.93 (1076.88) <.01 | 3857.85 (494.25) <.01 |
| a | Var (Slope) | 160.62 (41.39) <.01 | 156.69 (41.65) <.01 | 41.29 (28.58) .15 | 145.68 (49.32) <.01 |
| a | Var (Residual) | 1625.55 (61.70) <.01 | 1623.78 (63.01) <.01 | 1700.25 (104.06) <.01 | 1599.25 (77.93) <.01 |
| b | Var (Level) | 10.64 (0.82) <.01 | 9.06 (0.73) <.01 | 6.39 (1.23) <.01 | 7.64 (0.72) <.01 |
| b | Var (Slope) | 0.10 (0.03) <.01 | 0.10 (0.03) <.01 | 0.05 (0.04) .16 | 0.10 (0.04) .02 |
| b | Var (Residual) | 2.69 (0.13) <.01 | 2.69 (0.13) <.01 | 2.39 (0.22) <.01 | 2.79 (0.13) <.01 |
| a | Covar (Level, Slope) | -565.27 (163.30) <.01 | -552.12 (169.75) <.01 | -302.37 (132.32) .02 | -308.66 (150.02) .04 |
| b | Covar (Level, Slope) | -0.37 (0.16) .02 | -0.30 (0.14) .04 | 0.02 (0.15) .89 | -0.28 (0.14) .05 |
|  | Correlation of Levels | 0.015 | -0.0051 | -0.099 | 0.134 |
|  | Correlation of Slopes | 0.305 | 0.2791 | -0.513 | 0.438 |
|  | Correlation of Residuals | 0.010 | 0.0092 | 0.070 | -0.027 |
|  | N | 595 | 595 | 150 | 545 |
|  | occasions | 8 | 8 | 8 | 5 |
|  | parameters | 21 | 25 | 29 | 43 |
|  | LL | -7,635 | -7,596 | -3,870 | -12,349 |
|  | AIC | 15,312 | 15,241 | 7,797 | 24,783 |
|  | BIC | 15,404 | 15,351 | 7,884 | 24,968 |

## fas

Gender = *female*; Process (a) = *pef*; Process (b) = *fas*

|  |  |  |
| --- | --- | --- |
| process | label | aehplus |
| ab | Covar (Levels) | 130.95 (58.97) .03 |
| ab | Covar (Slopes) | 0.96 (3.50) .78 |
| ab | Covar (Residuals) | 5.01 (10.59) .64 |
| er | Corr (Levels) | 0.19 (0.08) .02 |
| er | Corr (Slopes) | 0.10 (0.38) .79 |
| er | Corr (Residuals) | 0.02 (0.05) .64 |
| a | Level | 279.58 (13.36) <.01 |
| a | Slope | -7.86 (4.25) .06 |
| a | Level \* age | -2.57 (0.88) <.01 |
| a | Level \* education | 2.19 (1.29) .09 |
| a | Level \* height | 1.37 (0.64) .03 |
| a | Level \* smoking | -3.39 (8.20) .68 |
| a | Level \* cardio | -1.93 (12.48) .88 |
| a | Level \* diabetes | -28.19 (10.36) .01 |
| a | Slope \* age | -0.29 (0.28) .30 |
| a | Slope \* education | -0.43 (0.41) .30 |
| a | Slope \* height | 0.11 (0.21) .61 |
| a | Slope \* smoking | -0.06 (2.62) .98 |
| a | Slope \* cardio | -1.81 (4.60) .69 |
| a | Slope \* diabetes | 4.19 (3.35) .21 |
| b | Level | 23.56 (1.81) <.01 |
| b | Slope | 1.19 (0.41) <.01 |
| b | Level \* age | 0.02 (0.12) .87 |
| b | Level \* education | 1.46 (0.17) <.01 |
| b | Level \* height | -0.12 (0.09) .20 |
| b | Level \* smoking | 3.56 (0.98) <.01 |
| b | Level \* cardio | 0.24 (1.98) .90 |
| b | Level \* diabetes | -3.49 (1.46) .02 |
| b | Slope \* age | -0.07 (0.03) .01 |
| b | Slope \* education | -0.00 (0.04) .99 |
| b | Slope \* height | 0.02 (0.02) .39 |
| b | Slope \* smoking | -0.14 (0.24) .57 |
| b | Slope \* cardio | -0.58 (0.37) .12 |
| b | Slope \* diabetes | -0.12 (0.31) .69 |
| a | Var (Level) | 3891.61 (500.48) <.01 |
| a | Var (Slope) | 142.91 (49.88) <.01 |
| a | Var (Residual) | 1600.01 (78.76) <.01 |
| b | Var (Level) | 122.89 (10.84) <.01 |
| b | Var (Slope) | 0.62 (0.39) .11 |
| b | Var (Residual) | 24.63 (1.14) <.01 |
| a | Covar (Level, Slope) | -313.81 (150.31) .04 |
| b | Covar (Level, Slope) | -1.99 (1.81) .27 |
|  | Correlation of Levels | 0.189 |
|  | Correlation of Slopes | 0.102 |
|  | Correlation of Residuals | 0.025 |
|  | N | 545 |
|  | occasions | 5 |
|  | parameters | 43 |
|  | LL | -14,301 |
|  | AIC | 28,687 |
|  | BIC | 28,872 |

## logic\_tot

Gender = *female*; Process (a) = *pef*; Process (b) = *logic\_tot*

|  |  |  |
| --- | --- | --- |
| process | label | aehplus |
| ab | Covar (Levels) | 35.38 (61.57) .57 |
| ab | Covar (Slopes) | 2.85 (4.29) .51 |
| ab | Covar (Residuals) | -7.57 (15.76) .63 |
| er | Corr (Levels) | 0.07 (0.12) .57 |
| er | Corr (Slopes) | 0.30 (0.46) .51 |
| er | Corr (Residuals) | -0.03 (0.07) .63 |
| a | Level | 393.52 (31.82) <.01 |
| a | Slope | -7.07 (9.95) .48 |
| a | Level \* age | -2.53 (1.81) .16 |
| a | Level \* education | 3.10 (2.72) .25 |
| a | Level \* height | 0.61 (1.30) .64 |
| a | Level \* smoking | -21.68 (19.08) .26 |
| a | Level \* cardio | -21.95 (24.80) .38 |
| a | Level \* diabetes | -10.76 (21.27) .61 |
| a | Slope \* age | -0.58 (0.55) .29 |
| a | Slope \* education | -0.40 (0.78) .61 |
| a | Slope \* height | 0.90 (0.46) .05 |
| a | Slope \* smoking | 2.12 (5.73) .71 |
| a | Slope \* cardio | 7.82 (9.24) .40 |
| a | Slope \* diabetes | -2.44 (6.93) .72 |
| b | Level | 16.26 (1.50) <.01 |
| b | Slope | 1.26 (0.39) <.01 |
| b | Level \* age | -0.04 (0.08) .58 |
| b | Level \* education | 0.56 (0.12) <.01 |
| b | Level \* height | 0.05 (0.07) .45 |
| b | Level \* smoking | 1.52 (0.90) .09 |
| b | Level \* cardio | 1.47 (1.03) .15 |
| b | Level \* diabetes | -0.73 (0.99) .46 |
| b | Slope \* age | -0.10 (0.03) <.01 |
| b | Slope \* education | -0.07 (0.03) .05 |
| b | Slope \* height | -0.01 (0.02) .71 |
| b | Slope \* smoking | -0.22 (0.25) .38 |
| b | Slope \* cardio | 0.10 (0.29) .73 |
| b | Slope \* diabetes | 0.54 (0.31) .08 |
| a | Var (Level) | 11038.95 (2173.96) <.01 |
| a | Var (Slope) | 307.58 (119.55) .01 |
| a | Var (Residual) | 3639.96 (203.23) <.01 |
| b | Var (Level) | 25.64 (4.22) <.01 |
| b | Var (Slope) | 0.30 (0.27) .27 |
| b | Var (Residual) | 14.66 (0.97) <.01 |
| a | Covar (Level, Slope) | -981.30 (507.34) .05 |
| b | Covar (Level, Slope) | -0.50 (1.04) .63 |
|  | Correlation of Levels | 0.067 |
|  | Correlation of Slopes | 0.297 |
|  | Correlation of Residuals | -0.033 |
|  | N | 324 |
|  | occasions | 5 |
|  | parameters | 43 |
|  | LL | -8,634 |
|  | AIC | 17,355 |
|  | BIC | 17,517 |

## mmse

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

|  |  |  |
| --- | --- | --- |
| process | label | aehplus |
| ab | Covar (Levels) | 11.91 (7.20) .10 |
| ab | Covar (Slopes) | 0.06 (0.54) .92 |
| ab | Covar (Residuals) | -0.36 (1.57) .82 |
| er | Corr (Levels) | 0.18 (0.10) .09 |
| er | Corr (Slopes) | 0.07 (0.73) .92 |
| er | Corr (Residuals) | -0.01 (0.05) .82 |
| a | Level | 278.78 (13.18) <.01 |
| a | Slope | -7.38 (4.15) .07 |
| a | Level \* age | -2.52 (0.87) <.01 |
| a | Level \* education | 2.24 (1.29) .08 |
| a | Level \* height | 1.37 (0.63) .03 |
| a | Level \* smoking | -3.48 (8.09) .67 |
| a | Level \* cardio | -3.09 (12.41) .80 |
| a | Level \* diabetes | -28.66 (10.46) .01 |
| a | Slope \* age | -0.32 (0.28) .25 |
| a | Slope \* education | -0.44 (0.41) .28 |
| a | Slope \* height | 0.12 (0.21) .55 |
| a | Slope \* smoking | -0.14 (2.50) .95 |
| a | Slope \* cardio | -1.54 (4.39) .73 |
| a | Slope \* diabetes | 4.35 (3.40) .20 |
| b | Level | 25.62 (0.21) <.01 |
| b | Slope | 0.15 (0.06) .01 |
| b | Level \* age | -0.00 (0.01) .86 |
| b | Level \* education | 0.11 (0.02) <.01 |
| b | Level \* height | 0.01 (0.01) .54 |
| b | Level \* smoking | 0.27 (0.13) .04 |
| b | Level \* cardio | -0.02 (0.22) .92 |
| b | Level \* diabetes | -0.29 (0.17) .08 |
| b | Slope \* age | -0.00 (0.00) .60 |
| b | Slope \* education | -0.01 (0.01) .10 |
| b | Slope \* height | -0.00 (0.00) .59 |
| b | Slope \* smoking | -0.02 (0.04) .61 |
| b | Slope \* cardio | -0.08 (0.06) .19 |
| b | Slope \* diabetes | 0.02 (0.05) .73 |
| a | Var (Level) | 3867.01 (499.29) <.01 |
| a | Var (Slope) | 140.99 (50.63) <.01 |
| a | Var (Residual) | 1601.74 (79.44) <.01 |
| b | Var (Level) | 1.18 (0.14) <.01 |
| b | Var (Slope) | 0.00 (0.01) .62 |
| b | Var (Residual) | 0.72 (0.03) <.01 |
| a | Covar (Level, Slope) | -306.85 (150.44) .04 |
| b | Covar (Level, Slope) | -0.02 (0.03) .37 |
|  | Correlation of Levels | 0.176 |
|  | Correlation of Slopes | 0.073 |
|  | Correlation of Residuals | -0.011 |
|  | N | 545 |
|  | occasions | 5 |
|  | parameters | 43 |
|  | LL | -11,080 |
|  | AIC | 22,247 |
|  | BIC | 22,432 |

## symbol

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

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| process | label | a | ae | aeh | aehplus | full |
| ab | Covar (Levels) | 331.92 (108.27) <.01 | 342.04 (106.57) <.01 | 262.59 (126.47) .04 | 199.81 (64.21) <.01 | 213.34 (123.52) .08 |
| ab | Covar (Slopes) | 10.97 (3.34) <.01 | 12.46 (4.36) <.01 | 3.53 (4.39) .42 | 7.93 (4.46) .08 | 2.56 (4.92) .60 |
| ab | Covar (Residuals) | -1.96 (15.87) .90 | 1.80 (16.40) .91 | -2.03 (23.02) .93 | 4.83 (11.01) .66 | -2.07 (24.58) .93 |
| er | Corr (Levels) | --- | --- | --- | 0.26 (0.08) <.01 | --- |
| er | Corr (Slopes) | --- | --- | --- | 0.46 (0.25) .07 | --- |
| er | Corr (Residuals) | --- | --- | --- | 0.02 (0.05) .66 | --- |
| a | Level | 311.44 (13.06) <.01 | 293.53 (20.69) <.01 | 327.85 (24.34) <.01 | 276.33 (13.35) <.01 | 333.18 (26.59) <.01 |
| a | Slope | -11.58 (2.77) <.01 | -5.54 (5.62) .32 | -23.55 (7.43) <.01 | -6.79 (4.31) .12 | -23.53 (9.30) .01 |
| a | Level \* age | -4.29 (1.33) <.01 | -3.86 (1.41) .01 | -4.09 (1.78) .02 | -2.45 (0.88) <.01 | -4.27 (1.83) .02 |
| a | Level \* education | --- | 1.19 (2.35) .61 | -1.15 (2.70) .67 | 2.12 (1.29) .10 | -1.61 (2.76) .56 |
| a | Level \* height | --- | --- | 0.37 (1.15) .75 | 1.40 (0.64) .03 | 0.13 (1.22) .91 |
| a | Level \* smoking | --- | --- | --- | -2.60 (8.25) .75 | 0.00 (15.99) .99 |
| a | Level \* cardio | --- | --- | --- | -3.11 (12.48) .80 | -24.20 (31.60) .44 |
| a | Level \* diabetes | --- | --- | --- | -28.02 (10.56) .01 | -24.36 (26.24) .35 |
| a | Slope \* age | -0.23 (0.34) .51 | -0.40 (0.41) .34 | 0.11 (0.56) .84 | -0.35 (0.29) .22 | 0.14 (0.62) .83 |
| a | Slope \* education | --- | -0.42 (0.73) .56 | 0.29 (0.91) .75 | -0.38 (0.42) .36 | 0.41 (0.98) .68 |
| a | Slope \* height | --- | --- | 0.64 (0.40) .11 | 0.08 (0.22) .72 | 0.73 (0.41) .08 |
| a | Slope \* smoking | --- | --- | --- | -0.40 (2.65) .88 | 1.75 (5.38) .74 |
| a | Slope \* cardio | --- | --- | --- | -1.47 (4.51) .74 | 3.07 (11.47) .79 |
| a | Slope \* diabetes | --- | --- | --- | 4.36 (3.35) .19 | -2.07 (9.40) .83 |
| b | Level | 45.33 (1.24) <.01 | 32.42 (1.63) <.01 | 39.06 (3.07) <.01 | 37.12 (2.08) <.01 | 40.57 (3.68) <.01 |
| b | Slope | 0.54 (0.21) .01 | 1.16 (0.44) .01 | 0.56 (0.59) .34 | 1.38 (0.50) .01 | 0.62 (0.78) .42 |
| b | Level \* age | -0.59 (0.13) <.01 | -0.57 (0.11) <.01 | -0.35 (0.27) .20 | -0.37 (0.13) <.01 | -0.38 (0.28) .17 |
| b | Level \* education | --- | 2.02 (0.17) <.01 | 1.89 (0.35) <.01 | 1.57 (0.20) <.01 | 1.79 (0.38) <.01 |
| b | Level \* height | --- | --- | 0.08 (0.18) .66 | 0.07 (0.11) .53 | 0.05 (0.19) .78 |
| b | Level \* smoking | --- | --- | --- | 3.32 (1.08) <.01 | 2.19 (2.01) .27 |
| b | Level \* cardio | --- | --- | --- | -4.43 (2.76) .11 | -4.96 (8.15) .54 |
| b | Level \* diabetes | --- | --- | --- | -4.38 (1.60) .01 | -6.75 (2.82) .02 |
| b | Slope \* age | -0.06 (0.02) .02 | -0.04 (0.03) .09 | -0.06 (0.04) .08 | -0.10 (0.03) <.01 | -0.06 (0.04) .12 |
| b | Slope \* education | --- | -0.09 (0.05) .06 | -0.06 (0.07) .40 | -0.04 (0.04) .36 | -0.06 (0.09) .48 |
| b | Slope \* height | --- | --- | 0.00 (0.03) .90 | -0.04 (0.03) .18 | 0.00 (0.04) .91 |
| b | Slope \* smoking | --- | --- | --- | 0.06 (0.27) .83 | 0.09 (0.48) .85 |
| b | Slope \* cardio | --- | --- | --- | 0.58 (0.49) .24 | 0.00 (1.37) .99 |
| b | Slope \* diabetes | --- | --- | --- | -0.76 (0.37) .04 | -0.24 (0.56) .66 |
| a | Var (Level) | 5314.26 (886.62) <.01 | 5924.42 (1072.31) <.01 | 4906.13 (1072.06) <.01 | 3985.97 (501.94) <.01 | 4692.97 (1099.11) <.01 |
| a | Var (Slope) | 152.53 (39.36) <.01 | 257.04 (66.08) <.01 | 117.67 (64.73) .07 | 167.08 (52.77) <.01 | 102.83 (69.68) .14 |
| a | Var (Residual) | 1665.82 (53.18) <.01 | 1539.24 (60.16) <.01 | 1618.46 (83.00) <.01 | 1586.16 (79.85) <.01 | 1617.21 (98.54) <.01 |
| b | Var (Level) | 189.81 (14.19) <.01 | 143.96 (11.26) <.01 | 127.61 (23.26) <.01 | 146.25 (12.94) <.01 | 114.18 (21.13) <.01 |
| b | Var (Slope) | 1.31 (0.28) <.01 | 1.77 (0.39) <.01 | 0.36 (0.50) .47 | 1.79 (0.44) <.01 | 0.45 (0.63) .47 |
| b | Var (Residual) | 31.68 (1.23) <.01 | 30.30 (1.32) <.01 | 28.75 (2.01) <.01 | 28.77 (1.26) <.01 | 28.50 (2.24) <.01 |
| a | Covar (Level, Slope) | -520.59 (153.38) <.01 | -811.76 (241.28) <.01 | -416.41 (219.35) .06 | -375.02 (155.60) .02 | -385.95 (225.58) .09 |
| b | Covar (Level, Slope) | -6.08 (2.24) .01 | -5.11 (2.05) .01 | -1.49 (3.01) .62 | -7.16 (2.16) <.01 | -2.31 (3.06) .45 |
|  | Correlation of Levels | 0.3305 | 0.3704 | 0.3319 | 0.262 | 0.2914 |
|  | Correlation of Slopes | 0.7770 | 0.5831 | 0.5397 | 0.459 | 0.3750 |
|  | Correlation of Residuals | -0.0085 | 0.0084 | -0.0094 | 0.023 | -0.0096 |
|  | N | 592 | 592 | 150 | 545 | 150 |
|  | occasions | 9 | 7 | 6 | 5 | 6 |
|  | parameters | 21 | 25 | 29 | 43 | 45 |
|  | LL | -10,104 | -9,446 | -4,340 | -14,480 | -4,326 |
|  | AIC | 20,249 | 18,943 | 8,738 | 29,046 | 8,742 |
|  | BIC | 20,341 | 19,052 | 8,826 | 29,231 | 8,878 |

## trailsb

Gender = *female*; Process (a) = *pef*; Process (b) = *trailsb*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| process | label | a | ae | aeh | aehplus | full |
| ab | Covar (Levels) | -1437.76 (540.87) .01 | -1308.71 (509.10) .01 | -1005.15 (664.43) .13 | -402.35 (273.61) .14 | -731.95 (659.29) .27 |
| ab | Covar (Slopes) | -11.72 (15.69) .46 | -11.07 (16.06) .49 | -4.41 (27.72) .87 | 9.47 (19.46) .63 | -0.25 (28.09) .99 |
| ab | Covar (Residuals) | 17.39 (148.22) .91 | 13.54 (154.65) .93 | -80.60 (224.45) .72 | -24.99 (71.97) .73 | -80.64 (247.59) .74 |
| er | Corr (Levels) | --- | --- | --- | -0.13 (0.09) .12 | --- |
| er | Corr (Slopes) | --- | --- | --- | 0.28 (0.66) .66 | --- |
| er | Corr (Residuals) | --- | --- | --- | -0.02 (0.05) .73 | --- |
| a | Level | 319.62 (13.00) <.01 | 313.50 (20.64) <.01 | 332.19 (25.63) <.01 | 278.83 (13.33) <.01 | 338.48 (26.86) <.01 |
| a | Slope | -14.42 (2.89) <.01 | -11.07 (4.82) .02 | -25.89 (6.46) <.01 | -7.37 (4.25) .08 | -26.65 (7.66) <.01 |
| a | Level \* age | -4.57 (1.31) <.01 | -4.50 (1.31) <.01 | -4.17 (1.83) .02 | -2.59 (0.89) <.01 | -4.35 (1.93) .02 |
| a | Level \* education | --- | 1.07 (2.21) .63 | -1.56 (2.65) .56 | 2.22 (1.27) .08 | -2.06 (2.57) .42 |
| a | Level \* height | --- | --- | 0.60 (1.18) .61 | 1.35 (0.64) .04 | 0.35 (1.24) .78 |
| a | Level \* smoking | --- | --- | --- | -3.00 (8.44) .72 | -0.14 (16.04) .99 |
| a | Level \* cardio | --- | --- | --- | -3.71 (12.22) .76 | -22.83 (30.59) .46 |
| a | Level \* diabetes | --- | --- | --- | -28.05 (10.56) .01 | -28.03 (25.56) .27 |
| a | Slope \* age | -0.13 (0.33) .69 | -0.15 (0.33) .64 | 0.14 (0.44) .76 | -0.30 (0.29) .30 | 0.15 (0.53) .77 |
| a | Slope \* education | --- | -0.54 (0.58) .35 | 0.54 (0.70) .44 | -0.44 (0.40) .28 | 0.70 (0.75) .35 |
| a | Slope \* height | --- | --- | 0.51 (0.27) .05 | 0.11 (0.22) .61 | 0.61 (0.28) .03 |
| a | Slope \* smoking | --- | --- | --- | -0.24 (2.68) .93 | 1.88 (4.02) .64 |
| a | Slope \* cardio | --- | --- | --- | -1.34 (4.37) .76 | 2.44 (9.21) .79 |
| a | Slope \* diabetes | --- | --- | --- | 4.20 (3.42) .22 | -0.06 (9.22) .99 |
| b | Level | 125.49 (7.24) <.01 | 175.12 (7.45) <.01 | 171.28 (18.58) <.01 | 173.97 (9.30) <.01 | 172.13 (21.87) <.01 |
| b | Slope | 0.80 (1.30) .54 | -0.55 (2.05) .79 | 2.42 (5.06) .63 | 0.26 (2.40) .91 | 2.73 (6.22) .66 |
| b | Level \* age | 2.50 (0.64) <.01 | 2.31 (0.58) <.01 | 1.63 (1.38) .24 | 2.11 (0.61) <.01 | 2.06 (1.48) .16 |
| b | Level \* education | --- | -7.73 (0.90) <.01 | -7.82 (2.03) <.01 | -7.32 (0.95) <.01 | -7.32 (2.27) <.01 |
| b | Level \* height | --- | --- | -0.04 (0.78) .96 | 0.24 (0.43) .58 | 0.27 (0.92) .76 |
| b | Level \* smoking | --- | --- | --- | -15.93 (5.43) <.01 | -11.97 (9.91) .23 |
| b | Level \* cardio | --- | --- | --- | 4.70 (9.87) .63 | 29.70 (21.00) .16 |
| b | Level \* diabetes | --- | --- | --- | 23.75 (7.74) <.01 | 33.33 (17.81) .06 |
| b | Slope \* age | 0.29 (0.14) .04 | 0.30 (0.14) .04 | 0.21 (0.27) .43 | 0.01 (0.19) .94 | 0.19 (0.34) .58 |
| b | Slope \* education | --- | 0.20 (0.21) .33 | -0.05 (0.57) .93 | 0.14 (0.24) .54 | -0.11 (0.61) .86 |
| b | Slope \* height | --- | --- | 0.02 (0.18) .89 | -0.16 (0.14) .25 | -0.01 (0.22) .97 |
| b | Slope \* smoking | --- | --- | --- | -0.27 (1.82) .88 | -0.31 (2.98) .92 |
| b | Slope \* cardio | --- | --- | --- | -1.13 (2.60) .66 | -2.00 (6.44) .76 |
| b | Slope \* diabetes | --- | --- | --- | -0.34 (2.47) .89 | 2.66 (5.06) .60 |
| a | Var (Level) | 5503.46 (922.85) <.01 | 5447.84 (926.92) <.01 | 4821.22 (1077.52) <.01 | 3908.94 (515.18) <.01 | 4624.91 (1121.08) <.01 |
| a | Var (Slope) | 130.76 (35.96) <.01 | 124.33 (35.54) <.01 | 48.62 (27.63) .08 | 150.14 (50.26) <.01 | 39.51 (33.94) .24 |
| a | Var (Residual) | 1683.17 (52.72) <.01 | 1681.28 (52.10) <.01 | 1690.11 (79.14) <.01 | 1596.33 (78.89) <.01 | 1684.30 (89.20) <.01 |
| b | Var (Level) | 3389.97 (471.25) <.01 | 2698.95 (377.73) <.01 | 2724.82 (689.38) <.01 | 2341.27 (327.25) <.01 | 2258.31 (713.54) <.01 |
| b | Var (Slope) | 6.98 (9.28) .45 | 7.33 (9.45) .44 | 7.46 (16.87) .66 | 7.36 (14.63) .61 | 5.73 (18.88) .76 |
| b | Var (Residual) | 1740.06 (48.32) <.01 | 1740.02 (48.04) <.01 | 1478.80 (71.16) <.01 | 1447.09 (50.15) <.01 | 1475.00 (76.52) <.01 |
| a | Covar (Level, Slope) | -518.71 (152.31) <.01 | -491.83 (158.00) <.01 | -324.32 (139.94) .02 | -330.71 (152.30) .03 | -305.61 (167.55) .07 |
| b | Covar (Level, Slope) | 32.29 (68.53) .64 | 45.66 (66.49) .49 | 49.10 (103.59) .64 | 25.01 (66.26) .71 | 46.60 (133.62) .73 |
|  | Correlation of Levels | -0.33 | -0.3413 | -0.277 | -0.133 | -0.226 |
|  | Correlation of Slopes | -0.39 | -0.3667 | -0.231 | 0.285 | -0.016 |
|  | Correlation of Residuals | 0.01 | 0.0079 | -0.051 | -0.016 | -0.051 |
|  | N | 580 | 580 | 150 | 545 | 150 |
|  | occasions | 9 | 9 | 8 | 5 | 8 |
|  | parameters | 21 | 25 | 29 | 43 | 45 |
|  | LL | -13,187 | -13,142 | -5,891 | -17,497 | -5,875 |
|  | AIC | 26,416 | 26,333 | 11,840 | 35,081 | 11,840 |
|  | BIC | 26,507 | 26,442 | 11,928 | 35,265 | 11,975 |

## waisvocab

Gender = *female*; Process (a) = *pef*; Process (b) = *waisvocab*

|  |  |  |
| --- | --- | --- |
| process | label | aehplus |
| ab | Covar (Levels) | 14.27 (50.35) .78 |
| ab | Covar (Slopes) | -7.35 (3.77) .05 |
| ab | Covar (Residuals) | -8.95 (10.78) .41 |
| er | Corr (Levels) | 0.03 (0.09) .78 |
| er | Corr (Slopes) | -0.70 (0.40) .08 |
| er | Corr (Residuals) | -0.04 (0.05) .41 |
| a | Level | 278.94 (13.23) <.01 |
| a | Slope | -7.78 (4.20) .06 |
| a | Level \* age | -2.55 (0.87) <.01 |
| a | Level \* education | 2.25 (1.27) .08 |
| a | Level \* height | 1.36 (0.63) .03 |
| a | Level \* smoking | -3.83 (8.18) .64 |
| a | Level \* cardio | -2.10 (12.29) .86 |
| a | Level \* diabetes | -27.69 (10.49) .01 |
| a | Slope \* age | -0.28 (0.28) .32 |
| a | Slope \* education | -0.44 (0.40) .28 |
| a | Slope \* height | 0.12 (0.21) .56 |
| a | Slope \* smoking | 0.08 (2.68) .98 |
| a | Slope \* cardio | -1.62 (4.30) .71 |
| a | Slope \* diabetes | 3.96 (3.26) .22 |
| b | Level | 32.88 (1.67) <.01 |
| b | Slope | 0.04 (0.47) .94 |
| b | Level \* age | 0.01 (0.11) .96 |
| b | Level \* education | 1.75 (0.17) <.01 |
| b | Level \* height | 0.06 (0.07) .41 |
| b | Level \* smoking | 1.80 (0.82) .03 |
| b | Level \* cardio | 2.79 (1.67) .10 |
| b | Level \* diabetes | -3.81 (1.25) <.01 |
| b | Slope \* age | -0.03 (0.03) .30 |
| b | Slope \* education | 0.01 (0.04) .79 |
| b | Slope \* height | -0.01 (0.02) .70 |
| b | Slope \* smoking | -0.00 (0.27) .99 |
| b | Slope \* cardio | -0.38 (0.50) .44 |
| b | Slope \* diabetes | -0.29 (0.36) .41 |
| a | Var (Level) | 3937.79 (499.15) <.01 |
| a | Var (Slope) | 148.59 (49.17) <.01 |
| a | Var (Residual) | 1593.99 (78.22) <.01 |
| b | Var (Level) | 75.57 (8.39) <.01 |
| b | Var (Slope) | 0.75 (0.38) .05 |
| b | Var (Residual) | 32.98 (1.46) <.01 |
| a | Covar (Level, Slope) | -330.85 (148.04) .02 |
| b | Covar (Level, Slope) | -2.72 (1.62) .09 |
|  | Correlation of Levels | 0.026 |
|  | Correlation of Slopes | -0.698 |
|  | Correlation of Residuals | -0.039 |
|  | N | 545 |
|  | occasions | 5 |
|  | parameters | 43 |
|  | LL | -14,388 |
|  | AIC | 28,862 |
|  | BIC | 29,046 |

## word\_im

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

|  |  |  |
| --- | --- | --- |
| process | label | aehplus |
| ab | Covar (Levels) | 78.74 (26.90) <.01 |
| ab | Covar (Slopes) | 3.12 (2.14) .14 |
| ab | Covar (Residuals) | -5.33 (6.52) .41 |
| er | Corr (Levels) | 0.29 (0.10) <.01 |
| er | Corr (Slopes) | 0.64 (0.53) .23 |
| er | Corr (Residuals) | -0.04 (0.05) .41 |
| a | Level | 279.27 (13.19) <.01 |
| a | Slope | -7.51 (4.20) .07 |
| a | Level \* age | -2.46 (0.87) <.01 |
| a | Level \* education | 2.21 (1.30) .09 |
| a | Level \* height | 1.38 (0.63) .03 |
| a | Level \* smoking | -3.70 (8.34) .66 |
| a | Level \* cardio | -3.60 (12.36) .77 |
| a | Level \* diabetes | -28.41 (10.43) .01 |
| a | Slope \* age | -0.35 (0.28) .22 |
| a | Slope \* education | -0.45 (0.41) .27 |
| a | Slope \* height | 0.11 (0.21) .59 |
| a | Slope \* smoking | -0.02 (2.54) .99 |
| a | Slope \* cardio | -1.18 (4.33) .78 |
| a | Slope \* diabetes | 4.15 (3.36) .22 |
| b | Level | 32.62 (0.90) <.01 |
| b | Slope | 0.38 (0.26) .15 |
| b | Level \* age | -0.20 (0.05) <.01 |
| b | Level \* education | 0.22 (0.09) .01 |
| b | Level \* height | 0.02 (0.04) .63 |
| b | Level \* smoking | -0.38 (0.51) .46 |
| b | Level \* cardio | 1.12 (0.98) .25 |
| b | Level \* diabetes | -1.58 (0.71) .03 |
| b | Slope \* age | -0.02 (0.02) .16 |
| b | Slope \* education | -0.02 (0.03) .37 |
| b | Slope \* height | -0.00 (0.01) .76 |
| b | Slope \* smoking | 0.08 (0.14) .57 |
| b | Slope \* cardio | -0.10 (0.29) .73 |
| b | Slope \* diabetes | -0.06 (0.19) .76 |
| a | Var (Level) | 3930.10 (488.24) <.01 |
| a | Var (Slope) | 148.55 (48.94) <.01 |
| a | Var (Residual) | 1584.02 (75.11) <.01 |
| b | Var (Level) | 18.82 (2.16) <.01 |
| b | Var (Slope) | 0.16 (0.16) .33 |
| b | Var (Residual) | 10.99 (0.55) <.01 |
| a | Covar (Level, Slope) | -323.34 (148.40) .03 |
| b | Covar (Level, Slope) | 0.28 (0.61) .64 |
|  | Correlation of Levels | 0.29 |
|  | Correlation of Slopes | 0.64 |
|  | Correlation of Residuals | -0.04 |
|  | N | 545 |
|  | occasions | 5 |
|  | parameters | 43 |
|  | LL | -13,461 |
|  | AIC | 27,008 |
|  | BIC | 27,193 |

## Summary

Study = *EAS*; Gender = *female*; Process (a) = *pef*

Computed correlations:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| label | process\_b | a | ae | aeh | aehplus | full |
| Correlation of Levels | block | . | 0.19 | 0.21 | 0.25 | 0.19 |
| Correlation of Levels | bnt | . | . | . | 0.17 | . |
| Correlation of Levels | categories | . | . | . | 0.26 | . |
| Correlation of Levels | digit\_tot | 0.01 | -0.01 | -0.10 | 0.13 | . |
| Correlation of Levels | fas | . | . | . | 0.19 | . |
| Correlation of Levels | logic\_tot | . | . | . | 0.07 | . |
| Correlation of Levels | mmse | . | . | . | 0.18 | . |
| Correlation of Levels | symbol | 0.33 | 0.37 | 0.33 | 0.26 | 0.29 |
| Correlation of Levels | trailsb | -0.33 | -0.34 | -0.28 | -0.13 | -0.23 |
| Correlation of Levels | waisvocab | . | . | . | 0.03 | . |
| Correlation of Levels | word\_im | . | . | . | 0.29 | . |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| label | process\_b | a | ae | aeh | aehplus | full |
| Correlation of Slopes | block | . | 0.67 | 0.08 | 0.31 | 0.19 |
| Correlation of Slopes | bnt | . | . | . | 0.16 | . |
| Correlation of Slopes | categories | . | . | . | 0.53 | . |
| Correlation of Slopes | digit\_tot | 0.31 | 0.28 | -0.51 | 0.44 | . |
| Correlation of Slopes | fas | . | . | . | 0.10 | . |
| Correlation of Slopes | logic\_tot | . | . | . | 0.30 | . |
| Correlation of Slopes | mmse | . | . | . | 0.07 | . |
| Correlation of Slopes | symbol | 0.78 | 0.58 | 0.54 | 0.46 | 0.37 |
| Correlation of Slopes | trailsb | -0.39 | -0.37 | -0.23 | 0.29 | -0.02 |
| Correlation of Slopes | waisvocab | . | . | . | -0.70 | . |
| Correlation of Slopes | word\_im | . | . | . | 0.64 | . |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| label | process\_b | a | ae | aeh | aehplus | full |
| Correlation of Residuals | block | . | -0.00 | -0.01 | -0.01 | 0.00 |
| Correlation of Residuals | bnt | . | . | . | -0.06 | . |
| Correlation of Residuals | categories | . | . | . | -0.09 | . |
| Correlation of Residuals | digit\_tot | 0.01 | 0.01 | 0.07 | -0.03 | . |
| Correlation of Residuals | fas | . | . | . | 0.03 | . |
| Correlation of Residuals | logic\_tot | . | . | . | -0.03 | . |
| Correlation of Residuals | mmse | . | . | . | -0.01 | . |
| Correlation of Residuals | symbol | -0.01 | 0.01 | -0.01 | 0.02 | -0.01 |
| Correlation of Residuals | trailsb | 0.01 | 0.01 | -0.05 | -0.02 | -0.05 |
| Correlation of Residuals | waisvocab | . | . | . | -0.04 | . |
| Correlation of Residuals | word\_im | . | . | . | -0.04 | . |

P-values for corresponding covariances:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| label | process\_b | a | ae | aeh | aehplus | full |
| Covariance of Levels | block | . | 0.05 | 0.04 | 0.01 | 0.26 |
| Covariance of Levels | bnt | . | . | . | 0.07 | . |
| Covariance of Levels | categories | . | . | . | 0.00 | . |
| Covariance of Levels | digit\_tot | 0.91 | 0.97 | 0.50 | 0.15 | . |
| Covariance of Levels | fas | . | . | . | 0.03 | . |
| Covariance of Levels | logic\_tot | . | . | . | 0.57 | . |
| Covariance of Levels | mmse | . | . | . | 0.10 | . |
| Covariance of Levels | symbol | 0.00 | 0.00 | 0.04 | 0.00 | 0.08 |
| Covariance of Levels | trailsb | 0.01 | 0.01 | 0.13 | 0.14 | 0.27 |
| Covariance of Levels | waisvocab | . | . | . | 0.78 | . |
| Covariance of Levels | word\_im | . | . | . | 0.00 | . |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| label | process\_b | a | ae | aeh | aehplus | full |
| Covariance of Slopes | block | . | 0.00 | 0.85 | 0.40 | 0.84 |
| Covariance of Slopes | bnt | . | . | . | 0.83 | . |
| Covariance of Slopes | categories | . | . | . | 0.34 | . |
| Covariance of Slopes | digit\_tot | 0.25 | 0.30 | 0.40 | 0.18 | . |
| Covariance of Slopes | fas | . | . | . | 0.78 | . |
| Covariance of Slopes | logic\_tot | . | . | . | 0.51 | . |
| Covariance of Slopes | mmse | . | . | . | 0.92 | . |
| Covariance of Slopes | symbol | 0.00 | 0.00 | 0.42 | 0.08 | 0.60 |
| Covariance of Slopes | trailsb | 0.46 | 0.49 | 0.87 | 0.63 | 0.99 |
| Covariance of Slopes | waisvocab | . | . | . | 0.05 | . |
| Covariance of Slopes | word\_im | . | . | . | 0.14 | . |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| label | process\_b | a | ae | aeh | aehplus | full |
| Covariance of Residuals | block | . | 0.97 | 0.90 | 0.81 | 0.98 |
| Covariance of Residuals | bnt | . | . | . | 0.24 | . |
| Covariance of Residuals | categories | . | . | . | 0.11 | . |
| Covariance of Residuals | digit\_tot | 0.86 | 0.88 | 0.50 | 0.57 | . |
| Covariance of Residuals | fas | . | . | . | 0.64 | . |
| Covariance of Residuals | logic\_tot | . | . | . | 0.63 | . |
| Covariance of Residuals | mmse | . | . | . | 0.82 | . |
| Covariance of Residuals | symbol | 0.90 | 0.91 | 0.93 | 0.66 | 0.93 |
| Covariance of Residuals | trailsb | 0.91 | 0.93 | 0.72 | 0.73 | 0.74 |
| Covariance of Residuals | waisvocab | . | . | . | 0.41 | . |
| Covariance of Residuals | word\_im | . | . | . | 0.41 | . |

# male

Gender = *male*; Model type: *aehplus*; Process (a) = *pef*; Process (b): *block*, *bnt*, *categories*, *digit\_tot*, *fas*, *logic\_tot*, *mmse*, *symbol*, *trailsb*, *waisvocab*, *word\_im*

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| process | label | block | bnt | categories | digit\_tot | fas | logic\_tot | mmse | symbol | trailsb | waisvocab | word\_im | mean(sd) |
| ab | Covar (Levels) | 233.41 (84.93) .01 | 6.98 (25.80) .79 | 54.30 (88.35) .54 | 3.86 (36.29) .92 | 145.88 (108.60) .18 | 35.38 (61.57) .57 | 25.56 (13.13) .05 | 444.24 (125.41) <.01 | -2188.20 (674.13) <.01 | -12.89 (116.46) .91 | 31.41 (55.06) .57 | --- |
| ab | Covar (Slopes) | 5.16 (5.36) .34 | 0.25 (2.17) .91 | 5.08 (4.99) .31 | 1.11 (2.25) .62 | -2.03 (6.53) .76 | 2.85 (4.29) .51 | 0.96 (0.97) .32 | 17.97 (9.06) .05 | -81.33 (52.55) .12 | -7.50 (9.32) .42 | 3.54 (3.81) .35 | --- |
| ab | Covar (Residuals) | -32.02 (19.98) .11 | 4.05 (4.79) .40 | 6.40 (16.74) .70 | 7.35 (6.85) .28 | 5.89 (22.57) .79 | -7.57 (15.76) .63 | -2.22 (2.75) .42 | -43.62 (22.17) .05 | 3.96 (160.21) .98 | -6.48 (27.33) .81 | 6.38 (15.70) .68 | --- |
| er | Corr (Levels) | 0.31 (0.11) <.01 | 0.04 (0.14) .79 | 0.07 (0.11) .54 | 0.01 (0.12) .92 | 0.14 (0.11) .17 | 0.07 (0.12) .57 | 0.31 (0.16) .05 | 0.40 (0.10) <.01 | -0.42 (0.11) <.01 | -0.01 (0.13) .91 | 0.07 (0.12) .57 | --- |
| er | Corr (Slopes) | 0.58 (0.72) .42 | 0.16 (1.40) .91 | 0.30 (0.28) .29 | 0.26 (0.55) .63 | -0.42 (1.79) .81 | 0.30 (0.46) .51 | 0.76 (1.10) .49 | 0.67 (0.32) .04 | -0.96 (0.55) .08 | -0.58 (0.72) .42 | 0.38 (0.42) .37 | --- |
| er | Corr (Residuals) | -0.11 (0.07) .11 | 0.05 (0.06) .40 | 0.02 (0.06) .70 | 0.07 (0.06) .28 | 0.02 (0.07) .79 | -0.03 (0.07) .63 | -0.05 (0.06) .42 | -0.13 (0.07) .04 | 0.00 (0.07) .98 | -0.02 (0.07) .81 | 0.03 (0.08) .68 | --- |
| a | Level | 390.53 (32.30) <.01 | 395.28 (31.96) <.01 | 395.94 (32.15) <.01 | 391.53 (31.82) <.01 | 393.67 (32.12) <.01 | 393.52 (31.82) <.01 | 389.62 (32.14) <.01 | 387.77 (31.61) <.01 | 401.74 (33.10) <.01 | 389.70 (31.95) <.01 | 396.47 (32.16) <.01 | 393.25(4.00) |
| a | Slope | -6.48 (9.95) .52 | -7.75 (10.14) .44 | -8.25 (9.60) .39 | -6.52 (9.74) .50 | -7.11 (9.59) .46 | -7.07 (9.95) .48 | -6.27 (9.72) .52 | -5.19 (9.81) .60 | -9.31 (9.91) .35 | -6.01 (9.87) .54 | -8.54 (9.59) .37 | -7.14(1.22) |
| a | Level \* age | -2.42 (1.75) .16 | -2.54 (1.76) .15 | -2.54 (1.80) .16 | -2.52 (1.77) .15 | -2.56 (1.84) .16 | -2.53 (1.81) .16 | -2.45 (1.73) .16 | -2.10 (1.76) .23 | -2.67 (1.76) .13 | -2.46 (1.74) .16 | -2.55 (1.75) .14 | -2.48(0.14) |
| a | Level \* education | 3.15 (2.70) .24 | 3.01 (2.66) .26 | 2.92 (2.65) .27 | 3.26 (2.70) .23 | 3.33 (2.63) .20 | 3.10 (2.72) .25 | 3.38 (2.71) .21 | 3.02 (2.66) .26 | 2.46 (2.77) .37 | 3.37 (2.70) .21 | 2.98 (2.64) .26 | 3.09(0.26) |
| a | Level \* height | 0.60 (1.27) .64 | 0.46 (1.28) .72 | 0.62 (1.30) .63 | 0.50 (1.28) .70 | 0.53 (1.27) .68 | 0.61 (1.30) .64 | 0.57 (1.30) .66 | 0.77 (1.26) .54 | 0.60 (1.25) .63 | 0.49 (1.29) .70 | 0.70 (1.28) .58 | 0.59(0.09) |
| a | Level \* smoking | -19.41 (19.34) .32 | -20.81 (19.21) .28 | -22.47 (19.17) .24 | -21.99 (19.09) .25 | -21.61 (19.15) .26 | -21.68 (19.08) .26 | -19.32 (19.65) .32 | -21.73 (18.93) .25 | -21.68 (19.17) .26 | -22.03 (19.23) .25 | -21.74 (18.91) .25 | -21.32(1.04) |
| a | Level \* cardio | -25.75 (24.61) .29 | -23.73 (23.96) .32 | -21.80 (24.67) .38 | -22.99 (24.59) .35 | -24.19 (24.86) .33 | -21.95 (24.80) .38 | -22.47 (25.21) .37 | -25.84 (24.76) .30 | -22.02 (25.07) .38 | -22.14 (24.05) .36 | -22.67 (24.18) .35 | -23.23(1.47) |
| a | Level \* diabetes | -10.73 (21.01) .61 | -10.98 (21.38) .61 | -11.04 (20.95) .60 | -9.18 (20.97) .66 | -10.89 (21.00) .60 | -10.76 (21.27) .61 | -11.46 (21.04) .59 | -11.75 (20.66) .57 | -10.85 (20.65) .60 | -9.30 (22.08) .67 | -12.30 (20.91) .56 | -10.84(0.92) |
| a | Slope \* age | -0.60 (0.55) .28 | -0.59 (0.57) .30 | -0.60 (0.56) .28 | -0.56 (0.55) .31 | -0.56 (0.55) .31 | -0.58 (0.55) .29 | -0.59 (0.54) .27 | -0.73 (0.55) .18 | -0.52 (0.56) .36 | -0.57 (0.55) .29 | -0.57 (0.53) .29 | -0.59(0.05) |
| a | Slope \* education | -0.40 (0.77) .61 | -0.38 (0.75) .61 | -0.28 (0.76) .71 | -0.48 (0.76) .53 | -0.49 (0.74) .51 | -0.40 (0.78) .61 | -0.46 (0.79) .56 | -0.37 (0.77) .63 | -0.23 (0.78) .76 | -0.48 (0.77) .53 | -0.35 (0.74) .63 | -0.39(0.08) |
| a | Slope \* height | 0.86 (0.43) .04 | 0.98 (0.43) .02 | 0.81 (0.46) .08 | 0.95 (0.45) .03 | 0.94 (0.45) .04 | 0.90 (0.46) .05 | 0.92 (0.45) .04 | 0.80 (0.44) .07 | 0.90 (0.42) .03 | 0.97 (0.44) .03 | 0.88 (0.44) .04 | 0.90(0.06) |
| a | Slope \* smoking | 1.55 (5.78) .79 | 1.65 (5.70) .77 | 2.78 (5.76) .63 | 2.08 (5.70) .71 | 2.08 (5.65) .71 | 2.12 (5.73) .71 | 1.63 (5.66) .77 | 1.95 (5.71) .73 | 2.00 (5.61) .72 | 2.16 (5.65) .70 | 2.27 (5.75) .69 | 2.02(0.35) |
| a | Slope \* cardio | 8.58 (9.41) .36 | 8.73 (9.03) .33 | 7.55 (9.12) .41 | 8.48 (8.98) .34 | 8.56 (9.24) .35 | 7.82 (9.24) .40 | 7.67 (9.36) .41 | 9.41 (9.51) .32 | 7.56 (9.75) .44 | 7.83 (8.84) .38 | 8.38 (8.74) .34 | 8.23(0.59) |
| a | Slope \* diabetes | -2.40 (6.99) .73 | -2.36 (6.74) .73 | -2.67 (6.89) .70 | -2.84 (7.19) .69 | -2.75 (7.00) .69 | -2.44 (6.93) .72 | -2.27 (6.86) .74 | -1.82 (6.91) .79 | -2.59 (6.73) .70 | -3.43 (7.10) .63 | -1.75 (6.73) .79 | -2.48(0.47) |
| b | Level | 19.69 (2.09) <.01 | 10.88 (0.48) <.01 | 34.32 (1.88) <.01 | 12.17 (0.87) <.01 | 24.22 (2.76) <.01 | 16.26 (1.50) <.01 | 26.17 (0.25) <.01 | 33.71 (2.67) <.01 | 151.72 (13.30) <.01 | 34.41 (2.48) <.01 | 33.19 (1.33) <.01 | --- |
| b | Slope | 1.39 (0.45) <.01 | 0.21 (0.12) .08 | -0.11 (0.51) .83 | 0.34 (0.20) .09 | 1.17 (0.54) .03 | 1.26 (0.39) <.01 | 0.12 (0.08) .14 | 2.39 (0.65) <.01 | 1.51 (3.34) .65 | 0.64 (0.57) .26 | 0.05 (0.37) .88 | --- |
| b | Level \* age | 0.06 (0.12) .60 | 0.02 (0.03) .51 | -0.22 (0.12) .06 | 0.02 (0.04) .55 | 0.29 (0.14) .05 | -0.04 (0.08) .58 | -0.01 (0.01) .34 | -0.09 (0.16) .57 | 1.09 (0.76) .15 | 0.18 (0.14) .19 | -0.32 (0.07) <.01 | --- |
| b | Level \* education | 0.66 (0.18) <.01 | 0.14 (0.04) <.01 | 0.46 (0.16) <.01 | 0.27 (0.07) <.01 | 1.28 (0.21) <.01 | 0.56 (0.12) <.01 | 0.11 (0.02) <.01 | 1.44 (0.20) <.01 | -4.56 (1.15) <.01 | 1.66 (0.21) <.01 | 0.05 (0.11) .63 | --- |
| b | Level \* height | 0.06 (0.09) .51 | 0.01 (0.03) .60 | 0.19 (0.10) .06 | -0.03 (0.03) .38 | 0.18 (0.12) .15 | 0.05 (0.07) .45 | -0.01 (0.01) .52 | 0.16 (0.14) .24 | -1.27 (0.68) .06 | 0.10 (0.12) .41 | -0.01 (0.06) .82 | --- |
| b | Level \* smoking | -0.06 (1.28) .96 | 0.88 (0.32) <.01 | 2.13 (1.20) .07 | 1.00 (0.48) .04 | 1.50 (1.48) .31 | 1.52 (0.90) .09 | -0.06 (0.17) .73 | 1.98 (1.67) .24 | -0.15 (8.86) .99 | 1.53 (1.53) .32 | -0.87 (0.77) .26 | --- |
| b | Level \* cardio | -0.39 (1.26) .76 | -0.03 (0.36) .94 | 3.13 (1.57) .05 | -0.09 (0.49) .85 | 1.81 (1.88) .34 | 1.47 (1.03) .15 | 0.16 (0.20) .43 | 0.40 (1.88) .83 | -2.76 (10.05) .78 | 0.95 (1.68) .57 | 2.46 (0.96) .01 | --- |
| b | Level \* diabetes | -1.86 (1.22) .13 | -0.59 (0.34) .08 | -1.77 (1.32) .18 | -0.64 (0.51) .21 | -3.27 (1.53) .03 | -0.73 (0.99) .46 | -0.32 (0.16) .04 | -7.01 (1.69) <.01 | 21.96 (8.58) .01 | -2.00 (1.54) .20 | -1.45 (0.81) .07 | --- |
| b | Slope \* age | -0.07 (0.03) .01 | -0.02 (0.01) .01 | -0.05 (0.03) .10 | -0.01 (0.01) .31 | -0.08 (0.04) .02 | -0.10 (0.03) <.01 | -0.00 (0.00) .60 | -0.13 (0.04) <.01 | 0.52 (0.21) .02 | -0.07 (0.04) .06 | -0.02 (0.02) .39 | --- |
| b | Slope \* education | -0.02 (0.04) .64 | -0.00 (0.01) .72 | 0.03 (0.04) .54 | -0.01 (0.02) .71 | -0.03 (0.04) .50 | -0.07 (0.03) .05 | -0.02 (0.01) .03 | -0.14 (0.06) .02 | -0.17 (0.32) .59 | -0.01 (0.05) .80 | -0.01 (0.03) .74 | --- |
| b | Slope \* height | -0.02 (0.02) .52 | 0.00 (0.01) .81 | -0.08 (0.03) <.01 | 0.01 (0.01) .35 | -0.03 (0.02) .25 | -0.01 (0.02) .71 | 0.00 (0.00) .61 | -0.04 (0.04) .25 | 0.39 (0.23) .08 | -0.03 (0.04) .43 | -0.03 (0.02) .07 | --- |
| b | Slope \* smoking | 0.07 (0.29) .82 | -0.12 (0.08) .14 | -0.24 (0.30) .44 | -0.16 (0.11) .15 | 0.01 (0.32) .98 | -0.22 (0.25) .38 | 0.05 (0.05) .36 | -0.21 (0.42) .62 | -4.40 (2.36) .06 | -0.36 (0.40) .36 | 0.29 (0.22) .18 | --- |
| b | Slope \* cardio | 0.41 (0.34) .24 | 0.02 (0.11) .86 | 0.42 (0.39) .28 | 0.18 (0.12) .14 | 0.58 (0.36) .10 | 0.10 (0.29) .73 | -0.02 (0.07) .72 | 0.42 (0.51) .41 | -1.39 (2.40) .56 | -0.53 (0.43) .22 | -0.07 (0.26) .78 | --- |
| b | Slope \* diabetes | -0.24 (0.31) .43 | 0.18 (0.10) .08 | -0.03 (0.37) .94 | 0.01 (0.12) .91 | -0.04 (0.32) .89 | 0.54 (0.31) .08 | 0.06 (0.05) .23 | 0.20 (0.42) .64 | -0.18 (2.47) .94 | 0.00 (0.39) .99 | 0.40 (0.25) .12 | --- |
| a | Var (Level) | 11092.62 (2134.05) <.01 | 11035.97 (2146.10) <.01 | 11062.08 (2095.12) <.01 | 11186.26 (2140.02) <.01 | 11027.50 (2148.20) <.01 | 11038.95 (2173.96) <.01 | 11064.40 (2163.48) <.01 | 11101.78 (2077.44) <.01 | 11020.67 (2100.83) <.01 | 11012.35 (2219.37) <.01 | 10970.46 (2158.14) <.01 | 11055.73(57.00) |
| a | Var (Slope) | 323.15 (116.29) <.01 | 296.88 (109.39) .01 | 321.19 (119.49) .01 | 310.31 (118.53) .01 | 302.36 (117.95) .01 | 307.58 (119.55) .01 | 318.93 (122.49) .01 | 339.22 (121.49) <.01 | 295.58 (112.59) .01 | 303.80 (119.14) .01 | 297.08 (114.47) .01 | 310.55(13.70) |
| a | Var (Residual) | 3630.68 (188.01) <.01 | 3643.71 (201.79) <.01 | 3632.78 (193.84) <.01 | 3639.29 (202.10) <.01 | 3642.64 (199.47) <.01 | 3639.96 (203.23) <.01 | 3621.98 (194.45) <.01 | 3635.34 (199.63) <.01 | 3641.79 (197.76) <.01 | 3644.76 (201.75) <.01 | 3656.92 (207.64) <.01 | 3639.08(9.00) |
| b | Var (Level) | 51.62 (7.78) <.01 | 3.28 (0.57) <.01 | 58.22 (7.57) <.01 | 8.84 (1.21) <.01 | 91.38 (11.79) <.01 | 25.64 (4.22) <.01 | 0.63 (0.14) <.01 | 112.95 (13.27) <.01 | 2453.46 (368.38) <.01 | 70.02 (12.69) <.01 | 18.33 (3.35) <.01 | --- |
| b | Var (Slope) | 0.24 (0.36) .50 | 0.01 (0.02) .75 | 0.90 (0.46) .05 | 0.06 (0.06) .29 | 0.08 (0.40) .85 | 0.30 (0.27) .27 | 0.00 (0.01) .65 | 2.10 (0.64) <.01 | 24.11 (21.10) .25 | 0.54 (0.75) .47 | 0.30 (0.23) .20 | --- |
| b | Var (Residual) | 21.96 (1.23) <.01 | 1.59 (0.08) <.01 | 18.84 (1.04) <.01 | 2.97 (0.18) <.01 | 25.96 (1.66) <.01 | 14.66 (0.97) <.01 | 0.62 (0.03) <.01 | 28.97 (1.49) <.01 | 1268.35 (48.16) <.01 | 43.16 (2.52) <.01 | 11.58 (0.72) <.01 | --- |
| a | Covar (Level, Slope) | -1017.51 (497.69) .04 | -957.47 (489.88) .05 | -991.33 (496.53) .05 | -1014.17 (518.90) .05 | -966.35 (510.96) .06 | -981.30 (507.34) .05 | -1007.55 (520.23) .05 | -1051.22 (497.56) .04 | -953.13 (489.56) .05 | -971.59 (516.76) .06 | -955.32 (496.09) .05 | -987.90(31.53) |
| b | Covar (Level, Slope) | -0.53 (1.50) .72 | 0.03 (0.10) .77 | -2.40 (1.73) .16 | -0.32 (0.24) .19 | 1.94 (1.76) .27 | -0.50 (1.04) .63 | -0.00 (0.04) .99 | -4.79 (2.34) .04 | -91.76 (77.75) .24 | -2.93 (2.71) .28 | -0.57 (0.75) .44 | --- |
|  | Correlation of Levels | 0.31 | 0.037 | 0.068 | 0.012 | 0.145 | 0.067 | 0.307 | 0.40 | -0.4208 | -0.015 | 0.070 | 0.09(0.22) |
|  | Correlation of Slopes | 0.58 | 0.164 | 0.299 | 0.262 | -0.424 | 0.297 | 0.759 | 0.67 | -0.9634 | -0.583 | 0.378 | 0.13(0.55) |
|  | Correlation of Residuals | -0.11 | 0.053 | 0.024 | 0.071 | 0.019 | -0.033 | -0.047 | -0.13 | 0.0018 | -0.016 | 0.031 | -0.01(0.07) |
|  | N | 324 | 324 | 324 | 324 | 324 | 324 | 324 | 324 | 324 | 324 | 324 | 324.00(0.00) |
|  | occasions | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5.00(0.00) |
|  | parameters | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43.00(0.00) |
|  | LL | -8,940 | -7,498 | -8,917 | -7,880 | -9,052 | -8,634 | -6,920 | -9,189 | -11,079 | -9,249 | -8,549 | -8,719(1,083) |
|  | AIC | 17,966 | 15,082 | 17,919 | 15,847 | 18,191 | 17,355 | 13,926 | 18,465 | 22,245 | 18,584 | 17,183 | 17,524(2,167) |
|  | BIC | 18,129 | 15,245 | 18,082 | 16,009 | 18,353 | 17,517 | 14,088 | 18,627 | 22,407 | 18,746 | 17,346 | 17,686(2,167) |

## block

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

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| process | label | ae | aeh | aehplus |
| ab | Covar (Levels) | -122.43 (137.12) .37 | -89.80 (125.58) .47 | 233.41 (84.93) .01 |
| ab | Covar (Slopes) | -0.17 (3.37) .96 | -0.13 (18.94) .99 | 5.16 (5.36) .34 |
| ab | Covar (Residuals) | 7.05 (22.67) .76 | 28.00 (36.76) .45 | -32.02 (19.98) .11 |
| er | Corr (Levels) | --- | --- | 0.31 (0.11) <.01 |
| er | Corr (Slopes) | --- | --- | 0.58 (0.72) .42 |
| er | Corr (Residuals) | --- | --- | -0.11 (0.07) .11 |
| a | Level | 468.26 (40.46) <.01 | 412.91 (49.38) <.01 | 390.53 (32.30) <.01 |
| a | Slope | -18.94 (8.62) .03 | -29.25 (10.46) <.01 | -6.48 (9.95) .52 |
| a | Level \* age | -4.66 (2.91) .11 | -5.16 (3.10) .10 | -2.42 (1.75) .16 |
| a | Level \* education | 0.38 (4.09) .93 | 5.99 (4.49) .18 | 3.15 (2.70) .24 |
| a | Level \* height | --- | 3.87 (2.76) .16 | 0.60 (1.27) .64 |
| a | Level \* smoking | --- | --- | -19.41 (19.34) .32 |
| a | Level \* cardio | --- | --- | -25.75 (24.61) .29 |
| a | Level \* diabetes | --- | --- | -10.73 (21.01) .61 |
| a | Slope \* age | -0.19 (0.61) .76 | 0.61 (0.79) .44 | -0.60 (0.55) .28 |
| a | Slope \* education | -0.02 (1.00) .98 | 0.36 (1.10) .74 | -0.40 (0.77) .61 |
| a | Slope \* height | --- | -0.64 (1.35) .63 | 0.86 (0.43) .04 |
| a | Slope \* smoking | --- | --- | 1.55 (5.78) .79 |
| a | Slope \* cardio | --- | --- | 8.58 (9.41) .36 |
| a | Slope \* diabetes | --- | --- | -2.40 (6.99) .73 |
| b | Level | 20.52 (1.03) <.01 | 19.31 (3.81) <.01 | 19.69 (2.09) <.01 |
| b | Slope | 0.90 (0.26) <.01 | 1.57 (1.53) .31 | 1.39 (0.45) <.01 |
| b | Level \* age | -0.02 (0.11) .88 | 0.31 (0.35) .38 | 0.06 (0.12) .60 |
| b | Level \* education | 0.01 (0.03) .86 | 0.73 (0.30) .02 | 0.66 (0.18) <.01 |
| b | Level \* height | --- | 0.01 (0.28) .97 | 0.06 (0.09) .51 |
| b | Level \* smoking | --- | --- | -0.06 (1.28) .96 |
| b | Level \* cardio | --- | --- | -0.39 (1.26) .76 |
| b | Level \* diabetes | --- | --- | -1.86 (1.22) .13 |
| b | Slope \* age | -0.05 (0.02) <.01 | -0.08 (0.17) .62 | -0.07 (0.03) .01 |
| b | Slope \* education | -0.00 (0.03) .97 | -0.10 (0.12) .42 | -0.02 (0.04) .64 |
| b | Slope \* height | --- | -0.04 (0.14) .81 | -0.02 (0.02) .52 |
| b | Slope \* smoking | --- | --- | 0.07 (0.29) .82 |
| b | Slope \* cardio | --- | --- | 0.41 (0.34) .24 |
| b | Slope \* diabetes | --- | --- | -0.24 (0.31) .43 |
| a | Var (Level) | 12369.76 (3034.59) <.01 | 12541.22 (3161.93) <.01 | 11092.62 (2134.05) <.01 |
| a | Var (Slope) | 207.90 (118.40) .08 | 204.82 (213.03) .34 | 323.15 (116.29) <.01 |
| a | Var (Residual) | 4750.71 (840.79) <.01 | 4397.04 (1166.62) <.01 | 3630.68 (188.01) <.01 |
| b | Var (Level) | 76.62 (7.95) <.01 | 46.25 (13.11) <.01 | 51.62 (7.78) <.01 |
| b | Var (Slope) | 0.15 (0.15) .31 | 0.03 (7.94) .99 | 0.24 (0.36) .50 |
| b | Var (Residual) | 22.19 (1.50) <.01 | 23.78 (9.55) .01 | 21.96 (1.23) <.01 |
| a | Covar (Level, Slope) | -767.90 (619.22) .21 | -776.24 (651.36) .23 | -1017.51 (497.69) .04 |
| b | Covar (Level, Slope) | -2.12 (1.19) .07 | 0.01 (12.80) .99 | -0.53 (1.50) .72 |
|  | Correlation of Levels | -0.126 | -0.118 | 0.31 |
|  | Correlation of Slopes | -0.031 | -0.052 | 0.58 |
|  | Correlation of Residuals | 0.022 | 0.087 | -0.11 |
|  | N | 350 | 72 | 324 |
|  | occasions | 9 | 8 | 5 |
|  | parameters | 25 | 29 | 43 |
|  | LL | -5,823 | -2,542 | -8,940 |
|  | AIC | 11,697 | 5,143 | 17,966 |
|  | BIC | 11,793 | 5,209 | 18,129 |

## bnt

Gender = *male*; Process (a) = *pef*; Process (b) = *bnt*

|  |  |  |
| --- | --- | --- |
| process | label | aehplus |
| ab | Covar (Levels) | 6.98 (25.80) .79 |
| ab | Covar (Slopes) | 0.25 (2.17) .91 |
| ab | Covar (Residuals) | 4.05 (4.79) .40 |
| er | Corr (Levels) | 0.04 (0.14) .79 |
| er | Corr (Slopes) | 0.16 (1.40) .91 |
| er | Corr (Residuals) | 0.05 (0.06) .40 |
| a | Level | 395.28 (31.96) <.01 |
| a | Slope | -7.75 (10.14) .44 |
| a | Level \* age | -2.54 (1.76) .15 |
| a | Level \* education | 3.01 (2.66) .26 |
| a | Level \* height | 0.46 (1.28) .72 |
| a | Level \* smoking | -20.81 (19.21) .28 |
| a | Level \* cardio | -23.73 (23.96) .32 |
| a | Level \* diabetes | -10.98 (21.38) .61 |
| a | Slope \* age | -0.59 (0.57) .30 |
| a | Slope \* education | -0.38 (0.75) .61 |
| a | Slope \* height | 0.98 (0.43) .02 |
| a | Slope \* smoking | 1.65 (5.70) .77 |
| a | Slope \* cardio | 8.73 (9.03) .33 |
| a | Slope \* diabetes | -2.36 (6.74) .73 |
| b | Level | 10.88 (0.48) <.01 |
| b | Slope | 0.21 (0.12) .08 |
| b | Level \* age | 0.02 (0.03) .51 |
| b | Level \* education | 0.14 (0.04) <.01 |
| b | Level \* height | 0.01 (0.03) .60 |
| b | Level \* smoking | 0.88 (0.32) <.01 |
| b | Level \* cardio | -0.03 (0.36) .94 |
| b | Level \* diabetes | -0.59 (0.34) .08 |
| b | Slope \* age | -0.02 (0.01) .01 |
| b | Slope \* education | -0.00 (0.01) .72 |
| b | Slope \* height | 0.00 (0.01) .81 |
| b | Slope \* smoking | -0.12 (0.08) .14 |
| b | Slope \* cardio | 0.02 (0.11) .86 |
| b | Slope \* diabetes | 0.18 (0.10) .08 |
| a | Var (Level) | 11035.97 (2146.10) <.01 |
| a | Var (Slope) | 296.88 (109.39) .01 |
| a | Var (Residual) | 3643.71 (201.79) <.01 |
| b | Var (Level) | 3.28 (0.57) <.01 |
| b | Var (Slope) | 0.01 (0.02) .75 |
| b | Var (Residual) | 1.59 (0.08) <.01 |
| a | Covar (Level, Slope) | -957.47 (489.88) .05 |
| b | Covar (Level, Slope) | 0.03 (0.10) .77 |
|  | Correlation of Levels | 0.037 |
|  | Correlation of Slopes | 0.164 |
|  | Correlation of Residuals | 0.053 |
|  | N | 324 |
|  | occasions | 5 |
|  | parameters | 43 |
|  | LL | -7,498 |
|  | AIC | 15,082 |
|  | BIC | 15,245 |

## categories

Gender = *male*; Process (a) = *pef*; Process (b) = *categories*

|  |  |  |
| --- | --- | --- |
| process | label | aehplus |
| ab | Covar (Levels) | 54.30 (88.35) .54 |
| ab | Covar (Slopes) | 5.08 (4.99) .31 |
| ab | Covar (Residuals) | 6.40 (16.74) .70 |
| er | Corr (Levels) | 0.07 (0.11) .54 |
| er | Corr (Slopes) | 0.30 (0.28) .29 |
| er | Corr (Residuals) | 0.02 (0.06) .70 |
| a | Level | 395.94 (32.15) <.01 |
| a | Slope | -8.25 (9.60) .39 |
| a | Level \* age | -2.54 (1.80) .16 |
| a | Level \* education | 2.92 (2.65) .27 |
| a | Level \* height | 0.62 (1.30) .63 |
| a | Level \* smoking | -22.47 (19.17) .24 |
| a | Level \* cardio | -21.80 (24.67) .38 |
| a | Level \* diabetes | -11.04 (20.95) .60 |
| a | Slope \* age | -0.60 (0.56) .28 |
| a | Slope \* education | -0.28 (0.76) .71 |
| a | Slope \* height | 0.81 (0.46) .08 |
| a | Slope \* smoking | 2.78 (5.76) .63 |
| a | Slope \* cardio | 7.55 (9.12) .41 |
| a | Slope \* diabetes | -2.67 (6.89) .70 |
| b | Level | 34.32 (1.88) <.01 |
| b | Slope | -0.11 (0.51) .83 |
| b | Level \* age | -0.22 (0.12) .06 |
| b | Level \* education | 0.46 (0.16) <.01 |
| b | Level \* height | 0.19 (0.10) .06 |
| b | Level \* smoking | 2.13 (1.20) .07 |
| b | Level \* cardio | 3.13 (1.57) .05 |
| b | Level \* diabetes | -1.77 (1.32) .18 |
| b | Slope \* age | -0.05 (0.03) .10 |
| b | Slope \* education | 0.03 (0.04) .54 |
| b | Slope \* height | -0.08 (0.03) <.01 |
| b | Slope \* smoking | -0.24 (0.30) .44 |
| b | Slope \* cardio | 0.42 (0.39) .28 |
| b | Slope \* diabetes | -0.03 (0.37) .94 |
| a | Var (Level) | 11062.08 (2095.12) <.01 |
| a | Var (Slope) | 321.19 (119.49) .01 |
| a | Var (Residual) | 3632.78 (193.84) <.01 |
| b | Var (Level) | 58.22 (7.57) <.01 |
| b | Var (Slope) | 0.90 (0.46) .05 |
| b | Var (Residual) | 18.84 (1.04) <.01 |
| a | Covar (Level, Slope) | -991.33 (496.53) .05 |
| b | Covar (Level, Slope) | -2.40 (1.73) .16 |
|  | Correlation of Levels | 0.068 |
|  | Correlation of Slopes | 0.299 |
|  | Correlation of Residuals | 0.024 |
|  | N | 324 |
|  | occasions | 5 |
|  | parameters | 43 |
|  | LL | -8,917 |
|  | AIC | 17,919 |
|  | BIC | 18,082 |

## digit\_tot

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

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| process | label | a | ae | aeh | aehplus | full |
| ab | Covar (Levels) | -70.53 (80.52) .38 | -79.11 (82.09) .34 | -103.44 (109.85) .35 | 3.86 (36.29) .92 | -81.43 (142.00) .57 |
| ab | Covar (Slopes) | -1.66 (2.07) .42 | -1.73 (2.25) .44 | -5.04 (4.14) .22 | 1.11 (2.25) .62 | -4.07 (5.22) .43 |
| ab | Covar (Residuals) | 16.61 (8.93) .06 | 16.90 (9.43) .07 | 21.52 (14.71) .14 | 7.35 (6.85) .28 | 20.51 (20.13) .31 |
| er | Corr (Levels) | --- | --- | --- | 0.01 (0.12) .92 | --- |
| er | Corr (Slopes) | --- | --- | --- | 0.26 (0.55) .63 | --- |
| er | Corr (Residuals) | --- | --- | --- | 0.07 (0.06) .28 | --- |
| a | Level | 454.79 (29.61) <.01 | 436.64 (46.16) <.01 | 412.12 (66.58) <.01 | 391.53 (31.82) <.01 | 477.18 (153.24) <.01 |
| a | Slope | -15.22 (9.10) .10 | -12.33 (13.96) .38 | -31.06 (27.15) .25 | -6.52 (9.74) .50 | -37.62 (40.31) .35 |
| a | Level \* age | -3.64 (3.32) .27 | -3.64 (3.30) .27 | -4.29 (5.78) .46 | -2.52 (1.77) .15 | -5.20 (7.38) .48 |
| a | Level \* education | --- | 2.45 (5.00) .62 | 4.90 (7.21) .50 | 3.26 (2.70) .23 | 3.62 (9.86) .71 |
| a | Level \* height | --- | --- | 3.31 (3.02) .27 | 0.50 (1.28) .70 | 3.48 (4.64) .45 |
| a | Level \* smoking | --- | --- | --- | -21.99 (19.09) .25 | -42.30 (110.78) .70 |
| a | Level \* cardio | --- | --- | --- | -22.99 (24.59) .35 | -30.08 (93.01) .75 |
| a | Level \* diabetes | --- | --- | --- | -9.18 (20.97) .66 | -1.12 (61.35) .98 |
| a | Slope \* age | -0.56 (0.94) .55 | -0.56 (1.01) .58 | 0.34 (2.25) .88 | -0.56 (0.55) .31 | 0.45 (2.93) .88 |
| a | Slope \* education | --- | -0.39 (1.08) .72 | 0.98 (1.57) .53 | -0.48 (0.76) .53 | 1.15 (2.42) .64 |
| a | Slope \* height | --- | --- | -0.19 (0.98) .85 | 0.95 (0.45) .03 | -0.20 (2.08) .92 |
| a | Slope \* smoking | --- | --- | --- | 2.08 (5.70) .71 | 5.88 (23.22) .80 |
| a | Slope \* cardio | --- | --- | --- | 8.48 (8.98) .34 | 9.02 (23.38) .70 |
| a | Slope \* diabetes | --- | --- | --- | -2.84 (7.19) .69 | -3.37 (20.12) .87 |
| b | Level | 13.76 (0.39) <.01 | 13.75 (0.40) <.01 | 14.09 (2.16) <.01 | 12.17 (0.87) <.01 | 13.69 (3.84) <.01 |
| b | Slope | 0.19 (0.08) .02 | 0.16 (0.11) .14 | -0.34 (0.42) .42 | 0.34 (0.20) .09 | -0.31 (0.80) .70 |
| b | Level \* age | -0.03 (0.04) .50 | -0.03 (0.04) .50 | -0.06 (0.14) .69 | 0.02 (0.04) .55 | -0.04 (0.19) .83 |
| b | Level \* education | --- | 0.00 (0.01) .98 | 0.29 (0.19) .13 | 0.27 (0.07) <.01 | 0.33 (0.26) .20 |
| b | Level \* height | --- | --- | -0.15 (0.07) .03 | -0.03 (0.03) .38 | -0.12 (0.09) .15 |
| b | Level \* smoking | --- | --- | --- | 1.00 (0.48) .04 | 0.91 (1.95) .64 |
| b | Level \* cardio | --- | --- | --- | -0.09 (0.49) .85 | 0.66 (1.78) .71 |
| b | Level \* diabetes | --- | --- | --- | -0.64 (0.51) .21 | -0.82 (1.92) .67 |
| b | Slope \* age | -0.00 (0.01) .62 | -0.00 (0.01) .63 | 0.02 (0.03) .49 | -0.01 (0.01) .31 | 0.02 (0.04) .67 |
| b | Slope \* education | --- | 0.00 (0.01) .70 | 0.01 (0.03) .84 | -0.01 (0.02) .71 | 0.00 (0.05) .98 |
| b | Slope \* height | --- | --- | 0.01 (0.01) .40 | 0.01 (0.01) .35 | 0.00 (0.02) .91 |
| b | Slope \* smoking | --- | --- | --- | -0.16 (0.11) .15 | -0.09 (0.38) .81 |
| b | Slope \* cardio | --- | --- | --- | 0.18 (0.12) .14 | 0.03 (0.64) .96 |
| b | Slope \* diabetes | --- | --- | --- | 0.01 (0.12) .91 | -0.10 (0.58) .86 |
| a | Var (Level) | 12724.37 (3116.69) <.01 | 12613.78 (3355.28) <.01 | 12625.82 (5395.72) .02 | 11186.26 (2140.02) <.01 | 12472.82 (8409.86) .14 |
| a | Var (Slope) | 282.59 (137.18) .04 | 288.30 (153.70) .06 | 375.76 (442.97) .40 | 310.31 (118.53) .01 | 366.50 (775.59) .64 |
| a | Var (Residual) | 4844.77 (353.36) <.01 | 4854.50 (356.20) <.01 | 4192.50 (487.00) <.01 | 3639.29 (202.10) <.01 | 4119.94 (715.76) <.01 |
| b | Var (Level) | 12.48 (1.25) <.01 | 12.48 (1.25) <.01 | 11.10 (3.37) <.01 | 8.84 (1.21) <.01 | 10.46 (4.10) .01 |
| b | Var (Slope) | 0.02 (0.03) .40 | 0.02 (0.03) .37 | 0.10 (0.08) .21 | 0.06 (0.06) .29 | 0.05 (0.12) .66 |
| b | Var (Residual) | 3.10 (0.17) <.01 | 3.09 (0.17) <.01 | 2.48 (0.37) <.01 | 2.97 (0.18) <.01 | 2.56 (0.42) <.01 |
| a | Covar (Level, Slope) | -980.03 (477.68) .04 | -985.11 (503.33) .05 | -931.01 (1187.26) .43 | -1014.17 (518.90) .05 | -1003.17 (1990.62) .61 |
| b | Covar (Level, Slope) | -0.34 (0.19) .07 | -0.36 (0.19) .06 | -0.62 (0.55) .26 | -0.32 (0.24) .19 | -0.51 (0.77) .50 |
|  | Correlation of Levels | -0.18 | -0.20 | -0.28 | 0.012 | -0.23 |
|  | Correlation of Slopes | -0.67 | -0.66 | -0.81 | 0.262 | -0.94 |
|  | Correlation of Residuals | 0.14 | 0.14 | 0.21 | 0.071 | 0.20 |
|  | N | 379 | 379 | 72 | 324 | 72 |
|  | occasions | 8 | 8 | 7 | 5 | 8 |
|  | parameters | 21 | 25 | 29 | 43 | 45 |
|  | LL | -4,878 | -4,877 | -2,147 | -7,880 | -2,175 |
|  | AIC | 9,798 | 9,805 | 4,352 | 15,847 | 4,439 |
|  | BIC | 9,881 | 9,903 | 4,418 | 16,009 | 4,542 |

## fas

Gender = *male*; Process (a) = *pef*; Process (b) = *fas*

|  |  |  |
| --- | --- | --- |
| process | label | aehplus |
| ab | Covar (Levels) | 145.88 (108.60) .18 |
| ab | Covar (Slopes) | -2.03 (6.53) .76 |
| ab | Covar (Residuals) | 5.89 (22.57) .79 |
| er | Corr (Levels) | 0.14 (0.11) .17 |
| er | Corr (Slopes) | -0.42 (1.79) .81 |
| er | Corr (Residuals) | 0.02 (0.07) .79 |
| a | Level | 393.67 (32.12) <.01 |
| a | Slope | -7.11 (9.59) .46 |
| a | Level \* age | -2.56 (1.84) .16 |
| a | Level \* education | 3.33 (2.63) .20 |
| a | Level \* height | 0.53 (1.27) .68 |
| a | Level \* smoking | -21.61 (19.15) .26 |
| a | Level \* cardio | -24.19 (24.86) .33 |
| a | Level \* diabetes | -10.89 (21.00) .60 |
| a | Slope \* age | -0.56 (0.55) .31 |
| a | Slope \* education | -0.49 (0.74) .51 |
| a | Slope \* height | 0.94 (0.45) .04 |
| a | Slope \* smoking | 2.08 (5.65) .71 |
| a | Slope \* cardio | 8.56 (9.24) .35 |
| a | Slope \* diabetes | -2.75 (7.00) .69 |
| b | Level | 24.22 (2.76) <.01 |
| b | Slope | 1.17 (0.54) .03 |
| b | Level \* age | 0.29 (0.14) .05 |
| b | Level \* education | 1.28 (0.21) <.01 |
| b | Level \* height | 0.18 (0.12) .15 |
| b | Level \* smoking | 1.50 (1.48) .31 |
| b | Level \* cardio | 1.81 (1.88) .34 |
| b | Level \* diabetes | -3.27 (1.53) .03 |
| b | Slope \* age | -0.08 (0.04) .02 |
| b | Slope \* education | -0.03 (0.04) .50 |
| b | Slope \* height | -0.03 (0.02) .25 |
| b | Slope \* smoking | 0.01 (0.32) .98 |
| b | Slope \* cardio | 0.58 (0.36) .10 |
| b | Slope \* diabetes | -0.04 (0.32) .89 |
| a | Var (Level) | 11027.50 (2148.20) <.01 |
| a | Var (Slope) | 302.36 (117.95) .01 |
| a | Var (Residual) | 3642.64 (199.47) <.01 |
| b | Var (Level) | 91.38 (11.79) <.01 |
| b | Var (Slope) | 0.08 (0.40) .85 |
| b | Var (Residual) | 25.96 (1.66) <.01 |
| a | Covar (Level, Slope) | -966.35 (510.96) .06 |
| b | Covar (Level, Slope) | 1.94 (1.76) .27 |
|  | Correlation of Levels | 0.145 |
|  | Correlation of Slopes | -0.424 |
|  | Correlation of Residuals | 0.019 |
|  | N | 324 |
|  | occasions | 5 |
|  | parameters | 43 |
|  | LL | -9,052 |
|  | AIC | 18,191 |
|  | BIC | 18,353 |

## logic\_tot

Gender = *male*; Process (a) = *pef*; Process (b) = *logic\_tot*

|  |  |  |
| --- | --- | --- |
| process | label | aehplus |
| ab | Covar (Levels) | 35.38 (61.57) .57 |
| ab | Covar (Slopes) | 2.85 (4.29) .51 |
| ab | Covar (Residuals) | -7.57 (15.76) .63 |
| er | Corr (Levels) | 0.07 (0.12) .57 |
| er | Corr (Slopes) | 0.30 (0.46) .51 |
| er | Corr (Residuals) | -0.03 (0.07) .63 |
| a | Level | 393.52 (31.82) <.01 |
| a | Slope | -7.07 (9.95) .48 |
| a | Level \* age | -2.53 (1.81) .16 |
| a | Level \* education | 3.10 (2.72) .25 |
| a | Level \* height | 0.61 (1.30) .64 |
| a | Level \* smoking | -21.68 (19.08) .26 |
| a | Level \* cardio | -21.95 (24.80) .38 |
| a | Level \* diabetes | -10.76 (21.27) .61 |
| a | Slope \* age | -0.58 (0.55) .29 |
| a | Slope \* education | -0.40 (0.78) .61 |
| a | Slope \* height | 0.90 (0.46) .05 |
| a | Slope \* smoking | 2.12 (5.73) .71 |
| a | Slope \* cardio | 7.82 (9.24) .40 |
| a | Slope \* diabetes | -2.44 (6.93) .72 |
| b | Level | 16.26 (1.50) <.01 |
| b | Slope | 1.26 (0.39) <.01 |
| b | Level \* age | -0.04 (0.08) .58 |
| b | Level \* education | 0.56 (0.12) <.01 |
| b | Level \* height | 0.05 (0.07) .45 |
| b | Level \* smoking | 1.52 (0.90) .09 |
| b | Level \* cardio | 1.47 (1.03) .15 |
| b | Level \* diabetes | -0.73 (0.99) .46 |
| b | Slope \* age | -0.10 (0.03) <.01 |
| b | Slope \* education | -0.07 (0.03) .05 |
| b | Slope \* height | -0.01 (0.02) .71 |
| b | Slope \* smoking | -0.22 (0.25) .38 |
| b | Slope \* cardio | 0.10 (0.29) .73 |
| b | Slope \* diabetes | 0.54 (0.31) .08 |
| a | Var (Level) | 11038.95 (2173.96) <.01 |
| a | Var (Slope) | 307.58 (119.55) .01 |
| a | Var (Residual) | 3639.96 (203.23) <.01 |
| b | Var (Level) | 25.64 (4.22) <.01 |
| b | Var (Slope) | 0.30 (0.27) .27 |
| b | Var (Residual) | 14.66 (0.97) <.01 |
| a | Covar (Level, Slope) | -981.30 (507.34) .05 |
| b | Covar (Level, Slope) | -0.50 (1.04) .63 |
|  | Correlation of Levels | 0.067 |
|  | Correlation of Slopes | 0.297 |
|  | Correlation of Residuals | -0.033 |
|  | N | 324 |
|  | occasions | 5 |
|  | parameters | 43 |
|  | LL | -8,634 |
|  | AIC | 17,355 |
|  | BIC | 17,517 |

## mmse

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

|  |  |  |
| --- | --- | --- |
| process | label | aehplus |
| ab | Covar (Levels) | 25.56 (13.13) .05 |
| ab | Covar (Slopes) | 0.96 (0.97) .32 |
| ab | Covar (Residuals) | -2.22 (2.75) .42 |
| er | Corr (Levels) | 0.31 (0.16) .05 |
| er | Corr (Slopes) | 0.76 (1.10) .49 |
| er | Corr (Residuals) | -0.05 (0.06) .42 |
| a | Level | 389.62 (32.14) <.01 |
| a | Slope | -6.27 (9.72) .52 |
| a | Level \* age | -2.45 (1.73) .16 |
| a | Level \* education | 3.38 (2.71) .21 |
| a | Level \* height | 0.57 (1.30) .66 |
| a | Level \* smoking | -19.32 (19.65) .32 |
| a | Level \* cardio | -22.47 (25.21) .37 |
| a | Level \* diabetes | -11.46 (21.04) .59 |
| a | Slope \* age | -0.59 (0.54) .27 |
| a | Slope \* education | -0.46 (0.79) .56 |
| a | Slope \* height | 0.92 (0.45) .04 |
| a | Slope \* smoking | 1.63 (5.66) .77 |
| a | Slope \* cardio | 7.67 (9.36) .41 |
| a | Slope \* diabetes | -2.27 (6.86) .74 |
| b | Level | 26.17 (0.25) <.01 |
| b | Slope | 0.12 (0.08) .14 |
| b | Level \* age | -0.01 (0.01) .34 |
| b | Level \* education | 0.11 (0.02) <.01 |
| b | Level \* height | -0.01 (0.01) .52 |
| b | Level \* smoking | -0.06 (0.17) .73 |
| b | Level \* cardio | 0.16 (0.20) .43 |
| b | Level \* diabetes | -0.32 (0.16) .04 |
| b | Slope \* age | -0.00 (0.00) .60 |
| b | Slope \* education | -0.02 (0.01) .03 |
| b | Slope \* height | 0.00 (0.00) .61 |
| b | Slope \* smoking | 0.05 (0.05) .36 |
| b | Slope \* cardio | -0.02 (0.07) .72 |
| b | Slope \* diabetes | 0.06 (0.05) .23 |
| a | Var (Level) | 11064.40 (2163.48) <.01 |
| a | Var (Slope) | 318.93 (122.49) .01 |
| a | Var (Residual) | 3621.98 (194.45) <.01 |
| b | Var (Level) | 0.63 (0.14) <.01 |
| b | Var (Slope) | 0.00 (0.01) .65 |
| b | Var (Residual) | 0.62 (0.03) <.01 |
| a | Covar (Level, Slope) | -1007.55 (520.23) .05 |
| b | Covar (Level, Slope) | -0.00 (0.04) .99 |
|  | Correlation of Levels | 0.307 |
|  | Correlation of Slopes | 0.759 |
|  | Correlation of Residuals | -0.047 |
|  | N | 324 |
|  | occasions | 5 |
|  | parameters | 43 |
|  | LL | -6,920 |
|  | AIC | 13,926 |
|  | BIC | 14,088 |

## symbol

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

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| process | label | a | ae | aeh | aehplus | full |
| ab | Covar (Levels) | 202.38 (275.03) .46 | 254.31 (324.72) .43 | 22.35 (219.05) .92 | 444.24 (125.41) <.01 | -11.37 (340.76) .97 |
| ab | Covar (Slopes) | 2.17 (6.18) .72 | 11.27 (11.71) .34 | -5.65 (15.36) .71 | 17.97 (9.06) .05 | -4.70 (22.26) .83 |
| ab | Covar (Residuals) | 14.26 (33.02) .67 | 5.07 (40.65) .90 | 17.96 (55.65) .75 | -43.62 (22.17) .05 | 16.72 (82.66) .84 |
| er | Corr (Levels) | --- | --- | --- | 0.40 (0.10) <.01 | --- |
| er | Corr (Slopes) | --- | --- | --- | 0.67 (0.32) .04 | --- |
| er | Corr (Residuals) | --- | --- | --- | -0.13 (0.07) .04 | --- |
| a | Level | 449.90 (33.34) <.01 | 439.83 (55.76) <.01 | 407.42 (64.29) <.01 | 387.77 (31.61) <.01 | 464.53 (143.13) <.01 |
| a | Slope | -14.85 (9.59) .12 | -12.82 (18.01) .48 | -26.04 (33.48) .44 | -5.19 (9.81) .60 | -26.95 (47.63) .57 |
| a | Level \* age | -4.76 (3.32) .15 | -4.45 (3.68) .23 | -4.66 (4.87) .34 | -2.10 (1.76) .23 | -5.39 (5.87) .36 |
| a | Level \* education | --- | 0.40 (5.41) .94 | 6.08 (6.40) .34 | 3.02 (2.66) .26 | 5.15 (10.03) .61 |
| a | Level \* height | --- | --- | 3.20 (2.81) .25 | 0.77 (1.26) .54 | 3.20 (3.90) .41 |
| a | Level \* smoking | --- | --- | --- | -21.73 (18.93) .25 | -35.26 (87.59) .69 |
| a | Level \* cardio | --- | --- | --- | -25.84 (24.76) .30 | -14.15 (84.51) .87 |
| a | Level \* diabetes | --- | --- | --- | -11.75 (20.66) .57 | -12.34 (59.41) .83 |
| a | Slope \* age | -0.24 (0.95) .80 | -0.40 (1.19) .74 | 0.35 (2.02) .86 | -0.73 (0.55) .18 | 0.39 (2.67) .88 |
| a | Slope \* education | --- | 0.05 (1.41) .97 | 0.22 (2.00) .91 | -0.37 (0.77) .63 | 0.17 (2.46) .94 |
| a | Slope \* height | --- | --- | -0.20 (1.07) .85 | 0.80 (0.44) .07 | -0.11 (1.59) .95 |
| a | Slope \* smoking | --- | --- | --- | 1.95 (5.71) .73 | 2.26 (22.21) .92 |
| a | Slope \* cardio | --- | --- | --- | 9.41 (9.51) .32 | -4.20 (47.52) .93 |
| a | Slope \* diabetes | --- | --- | --- | -1.82 (6.91) .79 | 1.49 (26.15) .95 |
| b | Level | 39.50 (1.32) <.01 | 38.47 (1.48) <.01 | 39.17 (4.82) <.01 | 33.71 (2.67) <.01 | 40.53 (9.49) <.01 |
| b | Slope | 0.47 (0.34) .16 | 1.05 (0.67) .12 | 0.68 (1.62) .68 | 2.39 (0.65) <.01 | 0.49 (2.27) .83 |
| b | Level \* age | -0.29 (0.14) .04 | -0.26 (0.14) .06 | -0.20 (0.32) .53 | -0.09 (0.16) .57 | -0.18 (0.39) .64 |
| b | Level \* education | --- | -0.02 (0.08) .83 | 1.27 (0.58) .03 | 1.44 (0.20) <.01 | 1.25 (0.74) .09 |
| b | Level \* height | --- | --- | 0.09 (0.25) .73 | 0.16 (0.14) .24 | 0.09 (0.26) .73 |
| b | Level \* smoking | --- | --- | --- | 1.98 (1.67) .24 | 0.13 (5.51) .98 |
| b | Level \* cardio | --- | --- | --- | 0.40 (1.88) .83 | -4.51 (6.34) .48 |
| b | Level \* diabetes | --- | --- | --- | -7.01 (1.69) <.01 | -4.21 (4.69) .37 |
| b | Slope \* age | -0.06 (0.04) .11 | -0.07 (0.04) .09 | -0.02 (0.08) .83 | -0.13 (0.04) <.01 | -0.02 (0.10) .87 |
| b | Slope \* education | --- | 0.01 (0.08) .91 | -0.14 (0.16) .39 | -0.14 (0.06) .02 | -0.14 (0.20) .50 |
| b | Slope \* height | --- | --- | 0.01 (0.06) .84 | -0.04 (0.04) .25 | 0.01 (0.08) .86 |
| b | Slope \* smoking | --- | --- | --- | -0.21 (0.42) .62 | 0.09 (1.10) .94 |
| b | Slope \* cardio | --- | --- | --- | 0.42 (0.51) .41 | 0.42 (1.71) .81 |
| b | Slope \* diabetes | --- | --- | --- | 0.20 (0.42) .64 | 0.14 (1.32) .91 |
| a | Var (Level) | 12660.93 (3253.44) <.01 | 11511.62 (3715.95) <.01 | 11004.88 (4343.89) .01 | 11101.78 (2077.44) <.01 | 10422.16 (6299.55) .10 |
| a | Var (Slope) | 238.03 (126.63) .06 | 216.25 (303.90) .48 | 154.46 (356.16) .66 | 339.22 (121.49) <.01 | 143.87 (587.66) .81 |
| a | Var (Residual) | 4727.66 (346.59) <.01 | 5679.66 (579.35) <.01 | 4601.12 (707.03) <.01 | 3635.34 (199.63) <.01 | 4614.54 (1247.23) <.01 |
| b | Var (Level) | 156.18 (16.60) <.01 | 147.53 (16.95) <.01 | 75.96 (27.20) <.01 | 112.95 (13.27) <.01 | 69.55 (34.24) .04 |
| b | Var (Slope) | 1.44 (0.38) <.01 | 2.02 (0.88) .02 | 1.94 (1.40) .17 | 2.10 (0.64) <.01 | 1.85 (1.81) .31 |
| b | Var (Residual) | 28.87 (1.38) <.01 | 28.37 (1.67) <.01 | 24.22 (3.16) <.01 | 28.97 (1.49) <.01 | 24.27 (4.44) <.01 |
| a | Covar (Level, Slope) | -883.37 (461.78) .06 | -693.83 (897.24) .44 | -394.50 (907.27) .66 | -1051.22 (497.56) .04 | -365.61 (1543.45) .81 |
| b | Covar (Level, Slope) | -3.58 (2.42) .14 | -2.40 (3.71) .52 | -0.59 (4.64) .90 | -4.79 (2.34) .04 | -0.09 (5.94) .99 |
|  | Correlation of Levels | 0.144 | 0.195 | 0.024 | 0.40 | -0.013 |
|  | Correlation of Slopes | 0.118 | 0.538 | -0.327 | 0.67 | -0.288 |
|  | Correlation of Residuals | 0.039 | 0.013 | 0.054 | -0.13 | 0.050 |
|  | N | 377 | 377 | 72 | 324 | 72 |
|  | occasions | 9 | 5 | 6 | 5 | 6 |
|  | parameters | 21 | 25 | 29 | 43 | 45 |
|  | LL | -6,302 | -5,301 | -2,420 | -9,189 | -2,416 |
|  | AIC | 12,646 | 10,651 | 4,898 | 18,465 | 4,922 |
|  | BIC | 12,728 | 10,750 | 4,964 | 18,627 | 5,024 |

## trailsb

Gender = *male*; Process (a) = *pef*; Process (b) = *trailsb*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| process | label | ae | aeh | aehplus | full |
| ab | Covar (Levels) | -9.52 (1556.25) .99 | 956.14 (1283.00) .46 | -2188.20 (674.13) <.01 | 1129.70 (2255.92) .62 |
| ab | Covar (Slopes) | 20.77 (31.42) .51 | 11.70 (68.11) .86 | -81.33 (52.55) .12 | 20.02 (163.04) .90 |
| ab | Covar (Residuals) | 4.79 (289.00) .99 | -267.66 (634.01) .67 | 3.96 (160.21) .98 | -284.29 (1021.38) .78 |
| er | Corr (Levels) | --- | --- | -0.42 (0.11) <.01 | --- |
| er | Corr (Slopes) | --- | --- | -0.96 (0.55) .08 | --- |
| er | Corr (Residuals) | --- | --- | 0.00 (0.07) .98 | --- |
| a | Level | 449.46 (48.72) <.01 | 413.57 (61.67) <.01 | 401.74 (33.10) <.01 | 467.80 (151.55) <.01 |
| a | Slope | -16.65 (13.61) .22 | -29.16 (30.96) .35 | -9.31 (9.91) .35 | -29.38 (50.40) .56 |
| a | Level \* age | -4.54 (3.23) .16 | -4.87 (5.25) .35 | -2.67 (1.76) .13 | -5.54 (8.93) .54 |
| a | Level \* education | 1.16 (5.44) .83 | 5.80 (6.35) .36 | 2.46 (2.77) .37 | 4.81 (8.00) .55 |
| a | Level \* height | --- | 3.09 (3.19) .33 | 0.60 (1.25) .63 | 3.10 (4.75) .52 |
| a | Level \* smoking | --- | --- | -21.68 (19.17) .26 | -35.41 (103.71) .73 |
| a | Level \* cardio | --- | --- | -22.02 (25.07) .38 | -18.28 (77.44) .81 |
| a | Level \* diabetes | --- | --- | -10.85 (20.65) .60 | 0.61 (77.01) .99 |
| a | Slope \* age | -0.19 (0.88) .83 | 0.43 (2.02) .83 | -0.52 (0.56) .36 | 0.44 (3.12) .89 |
| a | Slope \* education | -0.01 (1.19) .99 | 0.40 (1.97) .84 | -0.23 (0.78) .76 | 0.38 (2.20) .86 |
| a | Slope \* height | --- | -0.12 (1.03) .91 | 0.90 (0.42) .03 | -0.07 (1.61) .97 |
| a | Slope \* smoking | --- | --- | 2.00 (5.61) .72 | 3.21 (24.96) .90 |
| a | Slope \* cardio | --- | --- | 7.56 (9.75) .44 | -1.17 (24.21) .96 |
| a | Slope \* diabetes | --- | --- | -2.59 (6.73) .70 | -5.08 (33.70) .88 |
| b | Level | 131.50 (9.85) <.01 | 159.64 (30.56) <.01 | 151.72 (13.30) <.01 | 160.29 (70.48) .02 |
| b | Slope | 2.26 (3.10) .47 | -0.02 (9.19) .99 | 1.51 (3.34) .65 | 2.94 (17.25) .86 |
| b | Level \* age | 1.90 (0.82) .02 | 1.11 (2.27) .62 | 1.09 (0.76) .15 | 1.09 (3.22) .74 |
| b | Level \* education | 0.29 (0.37) .43 | -6.50 (3.32) .05 | -4.56 (1.15) <.01 | -6.31 (5.10) .22 |
| b | Level \* height | --- | -0.66 (1.39) .64 | -1.27 (0.68) .06 | -0.57 (2.04) .78 |
| b | Level \* smoking | --- | --- | -0.15 (8.86) .99 | -3.09 (45.38) .95 |
| b | Level \* cardio | --- | --- | -2.76 (10.05) .78 | 24.23 (34.58) .48 |
| b | Level \* diabetes | --- | --- | 21.96 (8.58) .01 | 3.59 (25.26) .89 |
| b | Slope \* age | 0.14 (0.20) .49 | 0.19 (0.57) .74 | 0.52 (0.21) .02 | 0.10 (0.74) .89 |
| b | Slope \* education | -0.18 (0.34) .60 | 0.30 (0.82) .71 | -0.17 (0.32) .59 | 0.17 (1.08) .88 |
| b | Slope \* height | --- | 0.42 (0.32) .19 | 0.39 (0.23) .08 | 0.38 (0.48) .43 |
| b | Slope \* smoking | --- | --- | -4.40 (2.36) .06 | -1.94 (11.21) .86 |
| b | Slope \* cardio | --- | --- | -1.39 (2.40) .56 | -9.06 (11.69) .44 |
| b | Slope \* diabetes | --- | --- | -0.18 (2.47) .94 | 4.74 (7.00) .50 |
| a | Var (Level) | 12270.35 (3595.63) <.01 | 12393.75 (4933.39) .01 | 11020.67 (2100.83) <.01 | 11597.20 (5921.83) .05 |
| a | Var (Slope) | 203.13 (111.33) .07 | 244.43 (352.12) .49 | 295.58 (112.59) .01 | 226.60 (632.86) .72 |
| a | Var (Residual) | 4774.16 (348.56) <.01 | 4309.09 (496.84) <.01 | 3641.79 (197.76) <.01 | 4301.06 (654.03) <.01 |
| b | Var (Level) | 3968.80 (636.03) <.01 | 1632.33 (733.60) .03 | 2453.46 (368.38) <.01 | 1526.70 (862.93) .08 |
| b | Var (Slope) | 35.32 (14.12) .01 | 34.69 (29.95) .25 | 24.11 (21.10) .25 | 13.39 (37.07) .72 |
| b | Var (Residual) | 1554.35 (56.69) <.01 | 1652.60 (158.73) <.01 | 1268.35 (48.16) <.01 | 1674.38 (205.62) <.01 |
| a | Covar (Level, Slope) | -760.94 (503.61) .13 | -812.64 (1069.79) .45 | -953.13 (489.56) .05 | -695.74 (1812.17) .70 |
| b | Covar (Level, Slope) | -147.56 (91.75) .11 | -106.16 (171.63) .54 | -91.76 (77.75) .24 | -67.38 (195.07) .73 |
|  | Correlation of Levels | -0.0014 | 0.21 | -0.4208 | 0.27 |
|  | Correlation of Slopes | 0.2452 | 0.13 | -0.9634 | 0.36 |
|  | Correlation of Residuals | 0.0018 | -0.10 | 0.0018 | -0.11 |
|  | N | 368 | 72 | 324 | 72 |
|  | occasions | 9 | 8 | 5 | 8 |
|  | parameters | 25 | 29 | 43 | 45 |
|  | LL | -8,270 | -3,279 | -11,079 | -3,271 |
|  | AIC | 16,590 | 6,616 | 22,245 | 6,631 |
|  | BIC | 16,688 | 6,682 | 22,407 | 6,734 |

## waisvocab

Gender = *male*; Process (a) = *pef*; Process (b) = *waisvocab*

|  |  |  |
| --- | --- | --- |
| process | label | aehplus |
| ab | Covar (Levels) | -12.89 (116.46) .91 |
| ab | Covar (Slopes) | -7.50 (9.32) .42 |
| ab | Covar (Residuals) | -6.48 (27.33) .81 |
| er | Corr (Levels) | -0.01 (0.13) .91 |
| er | Corr (Slopes) | -0.58 (0.72) .42 |
| er | Corr (Residuals) | -0.02 (0.07) .81 |
| a | Level | 389.70 (31.95) <.01 |
| a | Slope | -6.01 (9.87) .54 |
| a | Level \* age | -2.46 (1.74) .16 |
| a | Level \* education | 3.37 (2.70) .21 |
| a | Level \* height | 0.49 (1.29) .70 |
| a | Level \* smoking | -22.03 (19.23) .25 |
| a | Level \* cardio | -22.14 (24.05) .36 |
| a | Level \* diabetes | -9.30 (22.08) .67 |
| a | Slope \* age | -0.57 (0.55) .29 |
| a | Slope \* education | -0.48 (0.77) .53 |
| a | Slope \* height | 0.97 (0.44) .03 |
| a | Slope \* smoking | 2.16 (5.65) .70 |
| a | Slope \* cardio | 7.83 (8.84) .38 |
| a | Slope \* diabetes | -3.43 (7.10) .63 |
| b | Level | 34.41 (2.48) <.01 |
| b | Slope | 0.64 (0.57) .26 |
| b | Level \* age | 0.18 (0.14) .19 |
| b | Level \* education | 1.66 (0.21) <.01 |
| b | Level \* height | 0.10 (0.12) .41 |
| b | Level \* smoking | 1.53 (1.53) .32 |
| b | Level \* cardio | 0.95 (1.68) .57 |
| b | Level \* diabetes | -2.00 (1.54) .20 |
| b | Slope \* age | -0.07 (0.04) .06 |
| b | Slope \* education | -0.01 (0.05) .80 |
| b | Slope \* height | -0.03 (0.04) .43 |
| b | Slope \* smoking | -0.36 (0.40) .36 |
| b | Slope \* cardio | -0.53 (0.43) .22 |
| b | Slope \* diabetes | 0.00 (0.39) .99 |
| a | Var (Level) | 11012.35 (2219.37) <.01 |
| a | Var (Slope) | 303.80 (119.14) .01 |
| a | Var (Residual) | 3644.76 (201.75) <.01 |
| b | Var (Level) | 70.02 (12.69) <.01 |
| b | Var (Slope) | 0.54 (0.75) .47 |
| b | Var (Residual) | 43.16 (2.52) <.01 |
| a | Covar (Level, Slope) | -971.59 (516.76) .06 |
| b | Covar (Level, Slope) | -2.93 (2.71) .28 |
|  | Correlation of Levels | -0.015 |
|  | Correlation of Slopes | -0.583 |
|  | Correlation of Residuals | -0.016 |
|  | N | 324 |
|  | occasions | 5 |
|  | parameters | 43 |
|  | LL | -9,249 |
|  | AIC | 18,584 |
|  | BIC | 18,746 |

## word\_im

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

|  |  |  |
| --- | --- | --- |
| process | label | aehplus |
| ab | Covar (Levels) | 31.41 (55.06) .57 |
| ab | Covar (Slopes) | 3.54 (3.81) .35 |
| ab | Covar (Residuals) | 6.38 (15.70) .68 |
| er | Corr (Levels) | 0.07 (0.12) .57 |
| er | Corr (Slopes) | 0.38 (0.42) .37 |
| er | Corr (Residuals) | 0.03 (0.08) .68 |
| a | Level | 396.47 (32.16) <.01 |
| a | Slope | -8.54 (9.59) .37 |
| a | Level \* age | -2.55 (1.75) .14 |
| a | Level \* education | 2.98 (2.64) .26 |
| a | Level \* height | 0.70 (1.28) .58 |
| a | Level \* smoking | -21.74 (18.91) .25 |
| a | Level \* cardio | -22.67 (24.18) .35 |
| a | Level \* diabetes | -12.30 (20.91) .56 |
| a | Slope \* age | -0.57 (0.53) .29 |
| a | Slope \* education | -0.35 (0.74) .63 |
| a | Slope \* height | 0.88 (0.44) .04 |
| a | Slope \* smoking | 2.27 (5.75) .69 |
| a | Slope \* cardio | 8.38 (8.74) .34 |
| a | Slope \* diabetes | -1.75 (6.73) .79 |
| b | Level | 33.19 (1.33) <.01 |
| b | Slope | 0.05 (0.37) .88 |
| b | Level \* age | -0.32 (0.07) <.01 |
| b | Level \* education | 0.05 (0.11) .63 |
| b | Level \* height | -0.01 (0.06) .82 |
| b | Level \* smoking | -0.87 (0.77) .26 |
| b | Level \* cardio | 2.46 (0.96) .01 |
| b | Level \* diabetes | -1.45 (0.81) .07 |
| b | Slope \* age | -0.02 (0.02) .39 |
| b | Slope \* education | -0.01 (0.03) .74 |
| b | Slope \* height | -0.03 (0.02) .07 |
| b | Slope \* smoking | 0.29 (0.22) .18 |
| b | Slope \* cardio | -0.07 (0.26) .78 |
| b | Slope \* diabetes | 0.40 (0.25) .12 |
| a | Var (Level) | 10970.46 (2158.14) <.01 |
| a | Var (Slope) | 297.08 (114.47) .01 |
| a | Var (Residual) | 3656.92 (207.64) <.01 |
| b | Var (Level) | 18.33 (3.35) <.01 |
| b | Var (Slope) | 0.30 (0.23) .20 |
| b | Var (Residual) | 11.58 (0.72) <.01 |
| a | Covar (Level, Slope) | -955.32 (496.09) .05 |
| b | Covar (Level, Slope) | -0.57 (0.75) .44 |
|  | Correlation of Levels | 0.070 |
|  | Correlation of Slopes | 0.378 |
|  | Correlation of Residuals | 0.031 |
|  | N | 324 |
|  | occasions | 5 |
|  | parameters | 43 |
|  | LL | -8,549 |
|  | AIC | 17,183 |
|  | BIC | 17,346 |

## Summary

Study = *EAS*; Gender = *male*; Process (a) = *pef*

Computed correlations:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| label | process\_b | a | ae | aeh | aehplus | full |
| Correlation of Levels | block | . | -0.13 | -0.12 | 0.31 | . |
| Correlation of Levels | bnt | . | . | . | 0.04 | . |
| Correlation of Levels | categories | . | . | . | 0.07 | . |
| Correlation of Levels | digit\_tot | -0.18 | -0.20 | -0.28 | 0.01 | -0.23 |
| Correlation of Levels | fas | . | . | . | 0.15 | . |
| Correlation of Levels | logic\_tot | . | . | . | 0.07 | . |
| Correlation of Levels | mmse | . | . | . | 0.31 | . |
| Correlation of Levels | symbol | 0.14 | 0.20 | 0.02 | 0.40 | -0.01 |
| Correlation of Levels | trailsb | . | -0.00 | 0.21 | -0.42 | 0.27 |
| Correlation of Levels | waisvocab | . | . | . | -0.01 | . |
| Correlation of Levels | word\_im | . | . | . | 0.07 | . |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| label | process\_b | a | ae | aeh | aehplus | full |
| Correlation of Slopes | block | . | -0.03 | -0.05 | 0.58 | . |
| Correlation of Slopes | bnt | . | . | . | 0.16 | . |
| Correlation of Slopes | categories | . | . | . | 0.30 | . |
| Correlation of Slopes | digit\_tot | -0.67 | -0.66 | -0.81 | 0.26 | -0.94 |
| Correlation of Slopes | fas | . | . | . | -0.42 | . |
| Correlation of Slopes | logic\_tot | . | . | . | 0.30 | . |
| Correlation of Slopes | mmse | . | . | . | 0.76 | . |
| Correlation of Slopes | symbol | 0.12 | 0.54 | -0.33 | 0.67 | -0.29 |
| Correlation of Slopes | trailsb | . | 0.25 | 0.13 | -0.96 | 0.36 |
| Correlation of Slopes | waisvocab | . | . | . | -0.58 | . |
| Correlation of Slopes | word\_im | . | . | . | 0.38 | . |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| label | process\_b | a | ae | aeh | aehplus | full |
| Correlation of Residuals | block | . | 0.02 | 0.09 | -0.11 | . |
| Correlation of Residuals | bnt | . | . | . | 0.05 | . |
| Correlation of Residuals | categories | . | . | . | 0.02 | . |
| Correlation of Residuals | digit\_tot | 0.14 | 0.14 | 0.21 | 0.07 | 0.20 |
| Correlation of Residuals | fas | . | . | . | 0.02 | . |
| Correlation of Residuals | logic\_tot | . | . | . | -0.03 | . |
| Correlation of Residuals | mmse | . | . | . | -0.05 | . |
| Correlation of Residuals | symbol | 0.04 | 0.01 | 0.05 | -0.13 | 0.05 |
| Correlation of Residuals | trailsb | . | 0.00 | -0.10 | 0.00 | -0.11 |
| Correlation of Residuals | waisvocab | . | . | . | -0.02 | . |
| Correlation of Residuals | word\_im | . | . | . | 0.03 | . |

P-values for corresponding covariances:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| label | process\_b | a | ae | aeh | aehplus | full |
| Covariance of Levels | block | . | 0.37 | 0.47 | 0.01 | . |
| Covariance of Levels | bnt | . | . | . | 0.79 | . |
| Covariance of Levels | categories | . | . | . | 0.54 | . |
| Covariance of Levels | digit\_tot | 0.38 | 0.34 | 0.35 | 0.92 | 0.57 |
| Covariance of Levels | fas | . | . | . | 0.18 | . |
| Covariance of Levels | logic\_tot | . | . | . | 0.57 | . |
| Covariance of Levels | mmse | . | . | . | 0.05 | . |
| Covariance of Levels | symbol | 0.46 | 0.43 | 0.92 | 0.00 | 0.97 |
| Covariance of Levels | trailsb | . | 0.99 | 0.46 | 0.00 | 0.62 |
| Covariance of Levels | waisvocab | . | . | . | 0.91 | . |
| Covariance of Levels | word\_im | . | . | . | 0.57 | . |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| label | process\_b | a | ae | aeh | aehplus | full |
| Covariance of Slopes | block | . | 0.96 | 0.99 | 0.34 | . |
| Covariance of Slopes | bnt | . | . | . | 0.91 | . |
| Covariance of Slopes | categories | . | . | . | 0.31 | . |
| Covariance of Slopes | digit\_tot | 0.42 | 0.44 | 0.22 | 0.62 | 0.43 |
| Covariance of Slopes | fas | . | . | . | 0.76 | . |
| Covariance of Slopes | logic\_tot | . | . | . | 0.51 | . |
| Covariance of Slopes | mmse | . | . | . | 0.32 | . |
| Covariance of Slopes | symbol | 0.72 | 0.34 | 0.71 | 0.05 | 0.83 |
| Covariance of Slopes | trailsb | . | 0.51 | 0.86 | 0.12 | 0.90 |
| Covariance of Slopes | waisvocab | . | . | . | 0.42 | . |
| Covariance of Slopes | word\_im | . | . | . | 0.35 | . |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| label | process\_b | a | ae | aeh | aehplus | full |
| Covariance of Residuals | block | . | 0.76 | 0.45 | 0.11 | . |
| Covariance of Residuals | bnt | . | . | . | 0.40 | . |
| Covariance of Residuals | categories | . | . | . | 0.70 | . |
| Covariance of Residuals | digit\_tot | 0.06 | 0.07 | 0.14 | 0.28 | 0.31 |
| Covariance of Residuals | fas | . | . | . | 0.79 | . |
| Covariance of Residuals | logic\_tot | . | . | . | 0.63 | . |
| Covariance of Residuals | mmse | . | . | . | 0.42 | . |
| Covariance of Residuals | symbol | 0.67 | 0.90 | 0.75 | 0.05 | 0.84 |
| Covariance of Residuals | trailsb | . | 0.99 | 0.67 | 0.98 | 0.78 |
| Covariance of Residuals | waisvocab | . | . | . | 0.81 | . |
| Covariance of Residuals | word\_im | . | . | . | 0.68 | . |

#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