.

. \* STATA Model 1a: Empty 2-Level Model for Information Test Outcome

. xtmixed info , || Case: , variance reml covariance(unstructured)

Note: single-variable random-effects specification; covariance structure set to identity

Performing EM optimization:

Performing gradient-based optimization:

Iteration 0: log restricted-likelihood = -6073.7202

Iteration 1: log restricted-likelihood = -6073.7202

Computing standard errors:

Mixed-effects REML regression Number of obs = 1734

Group variable: Case Number of groups = 594

Obs per group: min = 1

avg = 2.9

max = 5

Wald chi2(0) = .

Log restricted-likelihood = -6073.7202 Prob > chi2 = .

------------------------------------------------------------------------------

info | Coef. Std. Err. z P>|z| [95% Conf. Interval]

-------------+----------------------------------------------------------------

\_cons | 25.46294 .4909978 51.86 0.000 24.5006 26.42527

------------------------------------------------------------------------------

------------------------------------------------------------------------------

Random-effects Parameters | Estimate Std. Err. [95% Conf. Interval]

-----------------------------+------------------------------------------------

Case: Identity |

var(\_cons) | 130.5222 8.38369 115.0827 148.0331

-----------------------------+------------------------------------------------

var(Residual) | 26.66816 1.120232 24.5605 28.95669

------------------------------------------------------------------------------

LR test vs. linear regression: chibar2(01) = 1411.30 Prob >= chibar2 = 0.0000

. estat ic, n(594)

-----------------------------------------------------------------------------

Model | Obs ll(null) ll(model) df AIC BIC

-------------+---------------------------------------------------------------

. | 594 . -6073.72 3 12153.44 12166.6

-----------------------------------------------------------------------------

Note: N=594 used in calculating BIC

. estimates store TwoLevel

.

. \* STATA Model 1b: Empty 3-Level Model for Information Test Outcome

. xtmixed info , || PairID: , covariance(unstructured) ///

> || Case: , variance reml covariance(unstructured)

Note: single-variable random-effects specification; covariance structure set to identity

Note: single-variable random-effects specification; covariance structure set to identity

Performing EM optimization:

Performing gradient-based optimization:

Iteration 0: log restricted-likelihood = -6022.972

Iteration 1: log restricted-likelihood = -6022.9702

Iteration 2: log restricted-likelihood = -6022.9702

Computing standard errors:

Mixed-effects REML regression Number of obs = 1734

-----------------------------------------------------------

| No. of Observations per Group

Group Variable | Groups Minimum Average Maximum

----------------+------------------------------------------

PairID | 337 1 5.1 10

Case | 594 1 2.9 5

-----------------------------------------------------------

Wald chi2(0) = .

Log restricted-likelihood = -6022.9702 Prob > chi2 = .

------------------------------------------------------------------------------

info | Coef. Std. Err. z P>|z| [95% Conf. Interval]

-------------+----------------------------------------------------------------

\_cons | 25.21018 .5962409 42.28 0.000 24.04157 26.37879

------------------------------------------------------------------------------

------------------------------------------------------------------------------

Random-effects Parameters | Estimate Std. Err. [95% Conf. Interval]

-----------------------------+------------------------------------------------

PairID: Identity |

var(\_cons) | 83.73498 9.817706 66.54352 105.3678

-----------------------------+------------------------------------------------

Case: Identity |

var(\_cons) | 47.33563 5.399659 37.85212 59.19517

-----------------------------+------------------------------------------------

var(Residual) | 26.75497 1.126957 24.63489 29.0575

------------------------------------------------------------------------------

LR test vs. linear regression: chi2(2) = 1512.80 Prob > chi2 = 0.0000

Note: LR test is conservative and provided only for reference.

. estat ic, n(337)

-----------------------------------------------------------------------------

Model | Obs ll(null) ll(model) df AIC BIC

-------------+---------------------------------------------------------------

. | 337 . -6022.97 4 12053.94 12069.22

-----------------------------------------------------------------------------

Note: N=337 used in calculating BIC

. estimates store ThreeLevel

. lrtest ThreeLevel TwoLevel

Likelihood-ratio test LR chi2(1) = 101.50

(Assumption: TwoLevel nested in ThreeLevel) Prob > chi2 = 0.0000

Note: The reported degrees of freedom assumes the null hypothesis is not on the boundary of

the parameter space. If this is not true, then the reported test is conservative.

Note: LR tests based on REML are valid only when the fixed-effects specification is identical

for both models.

.

. \* STATA Model 2a: Fixed Quadratic, Random Intercepts at Levels 2 and 3

. xtmixed info c.BFage85 c.time c.time#c.time , || PairID: , covariance(unstructured) ///

> || Case: , variance reml covariance(unstructured)

Note: single-variable random-effects specification; covariance structure set to identity

Note: single-variable random-effects specification; covariance structure set to identity

Performing EM optimization:

Performing gradient-based optimization:

Iteration 0: log restricted-likelihood = -5939.0232

Iteration 1: log restricted-likelihood = -5939.0225

Iteration 2: log restricted-likelihood = -5939.0225

Computing standard errors:

Mixed-effects REML regression Number of obs = 1734

-----------------------------------------------------------

| No. of Observations per Group

Group Variable | Groups Minimum Average Maximum

----------------+------------------------------------------

PairID | 337 1 5.1 10

Case | 594 1 2.9 5

-----------------------------------------------------------

Wald chi2(3) = 195.45

Log restricted-likelihood = -5939.0225 Prob > chi2 = 0.0000

-------------------------------------------------------------------------------

info | Coef. Std. Err. z P>|z| [95% Conf. Interval]

--------------+----------------------------------------------------------------

BFage85 | -.8073689 .1942406 -4.16 0.000 -1.188074 -.4266643

time | -.2350914 .1456677 -1.61 0.107 -.5205948 .050412

|

c.time#c.time | -.0555854 .0187153 -2.97 0.003 -.0922667 -.018904

|

\_cons | 25.10103 .6834791 36.73 0.000 23.76144 26.44062

-------------------------------------------------------------------------------

------------------------------------------------------------------------------

Random-effects Parameters | Estimate Std. Err. [95% Conf. Interval]

-----------------------------+------------------------------------------------

PairID: Identity |

var(\_cons) | 79.53662 9.694711 62.6346 100.9997

-----------------------------+------------------------------------------------

Case: Identity |

var(\_cons) | 52.4136 5.67978 42.38419 64.81628

-----------------------------+------------------------------------------------

var(Residual) | 22.77218 .9601037 20.96606 24.73389

------------------------------------------------------------------------------

LR test vs. linear regression: chi2(2) = 1636.90 Prob > chi2 = 0.0000

Note: LR test is conservative and provided only for reference.

. estat ic, n(337)

-----------------------------------------------------------------------------

Model | Obs ll(null) ll(model) df AIC BIC

-------------+---------------------------------------------------------------

. | 337 . -5939.023 7 11892.05 11918.79

-----------------------------------------------------------------------------

Note: N=337 used in calculating BIC

. estimates store FixQuad

.

. \* STATA Model 2b: Add Random Linear Slope for Twin

. xtmixed info c.BFage85 c.time c.time#c.time , || PairID: , covariance(unstructured) ///

> || Case: time, variance reml covariance(unstructured)

Note: single-variable random-effects specification; covariance structure set to identity

Performing EM optimization:

Performing gradient-based optimization:

Iteration 0: log restricted-likelihood = -5873.1045

Iteration 1: log restricted-likelihood = -5872.9993

Iteration 2: log restricted-likelihood = -5872.9993

Computing standard errors:

Mixed-effects REML regression Number of obs = 1734

-----------------------------------------------------------

| No. of Observations per Group

Group Variable | Groups Minimum Average Maximum

----------------+------------------------------------------

PairID | 337 1 5.1 10

Case | 594 1 2.9 5

-----------------------------------------------------------

Wald chi2(3) = 188.20

Log restricted-likelihood = -5872.9993 Prob > chi2 = 0.0000

-------------------------------------------------------------------------------

info | Coef. Std. Err. z P>|z| [95% Conf. Interval]

--------------+----------------------------------------------------------------

BFage85 | -.7307761 .1909202 -3.83 0.000 -1.104973 -.3565793

time | -.1454705 .132939 -1.09 0.274 -.4060262 .1150853

|

c.time#c.time | -.1021417 .0165422 -6.17 0.000 -.1345639 -.0697195

|

\_cons | 25.27722 .6626819 38.14 0.000 23.97839 26.57605

-------------------------------------------------------------------------------

------------------------------------------------------------------------------

Random-effects Parameters | Estimate Std. Err. [95% Conf. Interval]

-----------------------------+------------------------------------------------

PairID: Identity |

var(\_cons) | 80.10376 9.410732 63.62858 100.8448

-----------------------------+------------------------------------------------

Case: Unstructured |

var(time) | 1.178443 .1805631 .8727425 1.591224

var(\_cons) | 44.31214 5.257737 35.11767 55.91389

cov(time,\_cons) | 1.622178 .7900245 .0737584 3.170598

-----------------------------+------------------------------------------------

var(Residual) | 15.12274 .8324702 13.57607 16.84563

------------------------------------------------------------------------------

LR test vs. linear regression: chi2(4) = 1768.94 Prob > chi2 = 0.0000

Note: LR test is conservative and provided only for reference.

. estat ic, n(337)

-----------------------------------------------------------------------------

Model | Obs ll(null) ll(model) df AIC BIC

-------------+---------------------------------------------------------------

. | 337 . -5872.999 9 11764 11798.38

-----------------------------------------------------------------------------

Note: N=337 used in calculating BIC

. estimates store RandLin2

. lrtest RandLin2 FixQuad

Likelihood-ratio test LR chi2(2) = 132.05

(Assumption: FixQuad nested in RandLin2) Prob > chi2 = 0.0000

Note: The reported degrees of freedom assumes the null hypothesis is not on the boundary of

the parameter space. If this is not true, then the reported test is conservative.

Note: LR tests based on REML are valid only when the fixed-effects specification is identical

for both models.

.

. \* STATA Model 2c: Add Random Linear Slope for Pair

. xtmixed info c.BFage85 c.time c.time#c.time , || PairID: time, covariance(unstructured) ///

> || Case: time, variance reml covariance(unstructured)

Performing EM optimization:

Performing gradient-based optimization:

Iteration 0: log restricted-likelihood = -5874.8488

Iteration 1: log restricted-likelihood = -5872.7223

Iteration 2: log restricted-likelihood = -5872.612

Iteration 3: log restricted-likelihood = -5872.6076

Iteration 4: log restricted-likelihood = -5872.6076

Computing standard errors:

Mixed-effects REML regression Number of obs = 1734

-----------------------------------------------------------

| No. of Observations per Group

Group Variable | Groups Minimum Average Maximum

----------------+------------------------------------------

PairID | 337 1 5.1 10

Case | 594 1 2.9 5

-----------------------------------------------------------

Wald chi2(3) = 182.94

Log restricted-likelihood = -5872.6076 Prob > chi2 = 0.0000

-------------------------------------------------------------------------------

info | Coef. Std. Err. z P>|z| [95% Conf. Interval]

--------------+----------------------------------------------------------------

BFage85 | -.7438709 .190867 -3.90 0.000 -1.117963 -.3697784

time | -.1429383 .133292 -1.07 0.284 -.4041859 .1183093

|

c.time#c.time | -.1016908 .0165408 -6.15 0.000 -.1341103 -.0692713

|

\_cons | 25.25502 .6639108 38.04 0.000 23.95378 26.55626

-------------------------------------------------------------------------------

------------------------------------------------------------------------------

Random-effects Parameters | Estimate Std. Err. [95% Conf. Interval]

-----------------------------+------------------------------------------------

PairID: Unstructured |

var(time) | .0640187 .1696797 .000355 11.5449

var(\_cons) | 80.86105 9.503706 64.22388 101.8081

cov(time,\_cons) | -.7329904 .9257944 -2.547514 1.081533

-----------------------------+------------------------------------------------

Case: Unstructured |

var(time) | 1.116498 .2415957 .7305816 1.706266

var(\_cons) | 44.00753 5.22105 34.87711 55.52819

cov(time,\_cons) | 1.957119 .8826687 .2271198 3.687117

-----------------------------+------------------------------------------------

var(Residual) | 15.11455 .8311075 13.57031 16.8345

------------------------------------------------------------------------------

LR test vs. linear regression: chi2(6) = 1769.73 Prob > chi2 = 0.0000

Note: LR test is conservative and provided only for reference.

. estat ic, n(337)

-----------------------------------------------------------------------------

Model | Obs ll(null) ll(model) df AIC BIC

-------------+---------------------------------------------------------------

. | 337 . -5872.608 11 11767.22 11809.24

-----------------------------------------------------------------------------

Note: N=337 used in calculating BIC

. estimates store RandLin23

. lrtest RandLin23 RandLin2

Likelihood-ratio test LR chi2(2) = 0.78

(Assumption: RandLin2 nested in RandLin23) Prob > chi2 = 0.6759

Note: The reported degrees of freedom assumes the null hypothesis is not on the boundary of

the parameter space. If this is not true, then the reported test is conservative.

Note: LR tests based on REML are valid only when the fixed-effects specification is identical

for both models.

.

. \* STATA Model 3a: Grip Strength at each level via PERSON MEAN CENTERING

. xtmixed info c.BFage85 c.time c.time#c.time c.WPgripp c.WFgripp c.BFgripp9 , ///

> || PairID: , covariance(unstructured) || Case: time, variance reml covariance(unstructure

> d)

Note: single-variable random-effects specification; covariance structure set to identity

Performing EM optimization:

Performing gradient-based optimization:

Iteration 0: log restricted-likelihood = -5839.1373

Iteration 1: log restricted-likelihood = -5838.9589

Iteration 2: log restricted-likelihood = -5838.9589

Computing standard errors:

Mixed-effects REML regression Number of obs = 1734

-----------------------------------------------------------

| No. of Observations per Group

Group Variable | Groups Minimum Average Maximum

----------------+------------------------------------------

PairID | 337 1 5.1 10

Case | 594 1 2.9 5

-----------------------------------------------------------

Wald chi2(6) = 270.77

Log restricted-likelihood = -5838.9589 Prob > chi2 = 0.0000

-------------------------------------------------------------------------------

info | Coef. Std. Err. z P>|z| [95% Conf. Interval]

--------------+----------------------------------------------------------------

BFage85 | -.3463256 .1921102 -1.80 0.071 -.7228547 .0302034

time | .0884511 .1386187 0.64 0.523 -.1832365 .3601387

|

c.time#c.time | -.1010033 .0165328 -6.11 0.000 -.133407 -.0685995

|

WPgripp | .5031221 .0979629 5.14 0.000 .3111184 .6951259

WFgripp | .9143609 .2251347 4.06 0.000 .4731049 1.355617

BFgripp9 | 1.511445 .2463971 6.13 0.000 1.028515 1.994374

\_cons | 27.04317 .7528849 35.92 0.000 25.56754 28.5188

-------------------------------------------------------------------------------

------------------------------------------------------------------------------

Random-effects Parameters | Estimate Std. Err. [95% Conf. Interval]

-----------------------------+------------------------------------------------

PairID: Identity |

var(\_cons) | 71.39084 8.596088 56.38327 90.39297

-----------------------------+------------------------------------------------

Case: Unstructured |

var(time) | .9945399 .1647409 .7188274 1.376004

var(\_cons) | 41.90059 5.043539 33.09495 53.04917

cov(time,\_cons) | 1.224168 .7247081 -.1962339 2.64457

-----------------------------+------------------------------------------------

var(Residual) | 15.31228 .8413071 13.74903 17.05327

------------------------------------------------------------------------------

LR test vs. linear regression: chi2(4) = 1700.54 Prob > chi2 = 0.0000

Note: LR test is conservative and provided only for reference.

. estat ic, n(337)

-----------------------------------------------------------------------------

Model | Obs ll(null) ll(model) df AIC BIC

-------------+---------------------------------------------------------------

. | 337 . -5838.959 12 11701.92 11747.76

-----------------------------------------------------------------------------

Note: N=337 used in calculating BIC

. lincom 1\*WFgripp - 1\*WPgripp // Level-2 Contextual

> Effect

( 1) - [info]WPgripp + [info]WFgripp = 0

------------------------------------------------------------------------------

info | Coef. Std. Err. z P>|z| [95% Conf. Interval]

-------------+----------------------------------------------------------------

(1) | .4112388 .241575 1.70 0.089 -.0622395 .8847171

------------------------------------------------------------------------------

. lincom 1\*BFgripp9 - 1\*WFgripp // Level-3 Contextual

> Effect

( 1) - [info]WFgripp + [info]BFgripp9 = 0

------------------------------------------------------------------------------

info | Coef. Std. Err. z P>|z| [95% Conf. Interval]

-------------+----------------------------------------------------------------

(1) | .5970839 .3275152 1.82 0.068 -.044834 1.239002

------------------------------------------------------------------------------

.

. \* STATA Model 3b: Grip Strength Convergence across levels via GRAND MEAN CENTERING

. xtmixed info c.BFage85 c.time c.time#c.time c.TVgripp9 c.BPgripp9 c.BFgripp9 , ///

> || PairID: , covariance(unstructured) || Case: time, variance reml covariance(unstructure

> d)

Note: single-variable random-effects specification; covariance structure set to identity

Performing EM optimization:

Performing gradient-based optimization:

Iteration 0: log restricted-likelihood = -5839.1373

Iteration 1: log restricted-likelihood = -5838.9589

Iteration 2: log restricted-likelihood = -5838.9589

Computing standard errors:

Mixed-effects REML regression Number of obs = 1734

-----------------------------------------------------------

| No. of Observations per Group

Group Variable | Groups Minimum Average Maximum

----------------+------------------------------------------

PairID | 337 1 5.1 10

Case | 594 1 2.9 5

-----------------------------------------------------------

Wald chi2(6) = 270.77

Log restricted-likelihood = -5838.9589 Prob > chi2 = 0.0000

-------------------------------------------------------------------------------

info | Coef. Std. Err. z P>|z| [95% Conf. Interval]

--------------+----------------------------------------------------------------

BFage85 | -.3463256 .1921102 -1.80 0.071 -.7228547 .0302034

time | .0884511 .1386187 0.64 0.523 -.1832365 .3601387

|

c.time#c.time | -.1010033 .0165328 -6.11 0.000 -.133407 -.0685995

|

TVgripp9 | .5031221 .0979629 5.14 0.000 .3111184 .6951259

BPgripp9 | .4112388 .241575 1.70 0.089 -.0622395 .884717

BFgripp9 | .5970839 .3275152 1.82 0.068 -.044834 1.239002

\_cons | 27.04317 .7528849 35.92 0.000 25.56754 28.5188

-------------------------------------------------------------------------------

------------------------------------------------------------------------------

Random-effects Parameters | Estimate Std. Err. [95% Conf. Interval]

-----------------------------+------------------------------------------------

PairID: Identity |

var(\_cons) | 71.39084 8.596088 56.38327 90.39297

-----------------------------+------------------------------------------------

Case: Unstructured |

var(time) | .9945399 .1647409 .7188274 1.376004

var(\_cons) | 41.90059 5.043539 33.09495 53.04917

cov(time,\_cons) | 1.224168 .7247081 -.1962339 2.64457

-----------------------------+------------------------------------------------

var(Residual) | 15.31228 .8413071 13.74903 17.05327

------------------------------------------------------------------------------

LR test vs. linear regression: chi2(4) = 1700.54 Prob > chi2 = 0.0000

Note: LR test is conservative and provided only for reference.

. estat ic, n(337)

-----------------------------------------------------------------------------

Model | Obs ll(null) ll(model) df AIC BIC

-------------+---------------------------------------------------------------

. | 337 . -5838.959 12 11701.92 11747.76

-----------------------------------------------------------------------------

Note: N=337 used in calculating BIC

. lincom 1\*TVgripp9 + 1\*BPgripp9 // Level-2 Within-Fam

> ily Level 2 Effect

( 1) [info]TVgripp9 + [info]BPgripp9 = 0

------------------------------------------------------------------------------

info | Coef. Std. Err. z P>|z| [95% Conf. Interval]

-------------+----------------------------------------------------------------

(1) | .9143609 .2251347 4.06 0.000 .4731049 1.355617

------------------------------------------------------------------------------

. lincom 1\*TVgripp9 + 1\*BPgripp9 + 1\*BFgripp9 // Level-3 Between-Pair, Level 3 Effe

> ct

( 1) [info]TVgripp9 + [info]BPgripp9 + [info]BFgripp9 = 0

------------------------------------------------------------------------------

info | Coef. Std. Err. z P>|z| [95% Conf. Interval]

-------------+----------------------------------------------------------------

(1) | 1.511445 .2463971 6.13 0.000 1.028515 1.994374

------------------------------------------------------------------------------

.

. \* STATA Model 3c: Grip Strength at Level 1 and Level 2&3 via PERSON MEAN CENTERING

. xtmixed info c.BFage85 c.time c.time#c.time c.WPgripp c.BPgripp9 , ///

> || PairID: , covariance(unstructured) || Case: time, variance reml covariance(unstructure

> d)

Note: single-variable random-effects specification; covariance structure set to identity

Performing EM optimization:

Performing gradient-based optimization:

Iteration 0: log restricted-likelihood = -5840.5975

Iteration 1: log restricted-likelihood = -5840.4202

Iteration 2: log restricted-likelihood = -5840.4202

Computing standard errors:

Mixed-effects REML regression Number of obs = 1734

-----------------------------------------------------------

| No. of Observations per Group

Group Variable | Groups Minimum Average Maximum

----------------+------------------------------------------

PairID | 337 1 5.1 10

Case | 594 1 2.9 5

-----------------------------------------------------------

Wald chi2(5) = 267.14

Log restricted-likelihood = -5840.4202 Prob > chi2 = 0.0000

-------------------------------------------------------------------------------

info | Coef. Std. Err. z P>|z| [95% Conf. Interval]

--------------+----------------------------------------------------------------

BFage85 | -.4275427 .1874185 -2.28 0.023 -.7948762 -.0602091

time | .0904993 .1386117 0.65 0.514 -.1811746 .3621732

|

c.time#c.time | -.1011004 .0165312 -6.12 0.000 -.133501 -.0686997

|

WPgripp | .5071004 .097934 5.18 0.000 .3151532 .6990476

BPgripp9 | 1.184309 .1695658 6.98 0.000 .8519664 1.516652

\_cons | 26.47672 .687956 38.49 0.000 25.12835 27.82508

-------------------------------------------------------------------------------

------------------------------------------------------------------------------

Random-effects Parameters | Estimate Std. Err. [95% Conf. Interval]

-----------------------------+------------------------------------------------

PairID: Identity |

var(\_cons) | 71.96326 8.654375 56.85183 91.09136

-----------------------------+------------------------------------------------

Case: Unstructured |

var(time) | .9952698 .1647394 .7195284 1.376682

var(\_cons) | 41.97828 5.046668 33.16595 53.13209

cov(time,\_cons) | 1.234527 .7220033 -.180573 2.649628

-----------------------------+------------------------------------------------

var(Residual) | 15.3081 .8408553 13.74567 17.04813

------------------------------------------------------------------------------

LR test vs. linear regression: chi2(4) = 1705.54 Prob > chi2 = 0.0000

Note: LR test is conservative and provided only for reference.

. estat ic, n(337)

-----------------------------------------------------------------------------

Model | Obs ll(null) ll(model) df AIC BIC

-------------+---------------------------------------------------------------

. | 337 . -5840.42 11 11702.84 11744.86

-----------------------------------------------------------------------------

Note: N=337 used in calculating BIC

. lincom 1\*BPgripp9 - 1\*WPgripp // Level-2&3 Contextu

> al Effect

( 1) - [info]WPgripp + [info]BPgripp9 = 0

------------------------------------------------------------------------------

info | Coef. Std. Err. z P>|z| [95% Conf. Interval]

-------------+----------------------------------------------------------------

(1) | .6772089 .1925793 3.52 0.000 .2997605 1.054657

------------------------------------------------------------------------------

.

. \* STATA Model 3d: Grip Strength Convergence across Level 1 and 2&3 via GRAND MEAN CENTERING

. xtmixed info c.BFage85 c.time c.time#c.time c.TVgripp9 c.BPgripp9, ///

> || PairID: , covariance(unstructured) || Case: time, variance reml covariance(unstructure

> d)

Note: single-variable random-effects specification; covariance structure set to identity

Performing EM optimization:

Performing gradient-based optimization:

Iteration 0: log restricted-likelihood = -5840.5975

Iteration 1: log restricted-likelihood = -5840.4202

Iteration 2: log restricted-likelihood = -5840.4202

Computing standard errors:

Mixed-effects REML regression Number of obs = 1734

-----------------------------------------------------------

| No. of Observations per Group

Group Variable | Groups Minimum Average Maximum

----------------+------------------------------------------

PairID | 337 1 5.1 10

Case | 594 1 2.9 5

-----------------------------------------------------------

Wald chi2(5) = 267.14

Log restricted-likelihood = -5840.4202 Prob > chi2 = 0.0000

-------------------------------------------------------------------------------

info | Coef. Std. Err. z P>|z| [95% Conf. Interval]

--------------+----------------------------------------------------------------

BFage85 | -.4275427 .1874185 -2.28 0.023 -.7948762 -.0602091

time | .0904993 .1386117 0.65 0.514 -.1811746 .3621732

|

c.time#c.time | -.1011004 .0165312 -6.12 0.000 -.133501 -.0686997

|

TVgripp9 | .5071004 .097934 5.18 0.000 .3151532 .6990476

BPgripp9 | .6772089 .1925793 3.52 0.000 .2997604 1.054657

\_cons | 26.47672 .687956 38.49 0.000 25.12835 27.82508

-------------------------------------------------------------------------------

------------------------------------------------------------------------------

Random-effects Parameters | Estimate Std. Err. [95% Conf. Interval]

-----------------------------+------------------------------------------------

PairID: Identity |

var(\_cons) | 71.96326 8.654375 56.85183 91.09136

-----------------------------+------------------------------------------------

Case: Unstructured |

var(time) | .9952698 .1647394 .7195284 1.376682

var(\_cons) | 41.97828 5.046668 33.16595 53.13209

cov(time,\_cons) | 1.234527 .7220033 -.180573 2.649628

-----------------------------+------------------------------------------------

var(Residual) | 15.3081 .8408553 13.74567 17.04813

------------------------------------------------------------------------------

LR test vs. linear regression: chi2(4) = 1705.54 Prob > chi2 = 0.0000

Note: LR test is conservative and provided only for reference.

. estat ic, n(337)

-----------------------------------------------------------------------------

Model | Obs ll(null) ll(model) df AIC BIC

-------------+---------------------------------------------------------------

. | 337 . -5840.42 11 11702.84 11744.86

-----------------------------------------------------------------------------

Note: N=337 used in calculating BIC

. lincom 1\*TVgripp9 + 1\*BPgripp9 // Level-2&3 Between-

> Person Effect

( 1) [info]TVgripp9 + [info]BPgripp9 = 0

------------------------------------------------------------------------------

info | Coef. Std. Err. z P>|z| [95% Conf. Interval]

-------------+----------------------------------------------------------------

(1) | 1.184309 .1695658 6.98 0.000 .8519664 1.516652

------------------------------------------------------------------------------

.

end of do-file

.