**Cohort TW – Random intercepts only**

**> summary(lmb)**

Linear mixed model fit by maximum likelihood . t-tests use

Satterthwaite's method [lmerModLmerTest]

Formula: Elog ~ cond\_clean + (1 | setid) + (1 | ParticipantID)

Data: tw\_AG\_C

Weights: WeightsBarr

Control: lmerControl(optimizer = "bobyqa", optCtrl = list(maxfun = 4e+06))

AIC BIC logLik deviance df.resid

13028.7 13058.7 -6509.4 13018.7 2978

Scaled residuals:

Min 1Q Median 3Q Max

-2.0314 -0.7997 -0.5728 -0.2656 4.0945

Random effects:

Groups Name Variance Std.Dev.

ParticipantID (Intercept) 0.01891 0.1375

setid (Intercept) 0.02834 0.1683

Residual 59.64819 7.7232

Number of obs: 2983, groups: ParticipantID, 43; setid, 18

Fixed effects:

Estimate Std. Error df t value Pr(>|t|)

(Intercept) -1.08105 0.04937 30.35207 -21.90 <2e-16 \*\*\*

cond\_clean1 -0.31899 0.03166 2966.31489 -10.07 <2e-16 \*\*\*

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Correlation of Fixed Effects:

(Intr)

cond\_clean1 -0.260

**> summary(lm1)**

Linear mixed model fit by maximum likelihood . t-tests use Satterthwaite's method [lmerModLmerTest

]

Formula: Elog ~ cond\_clean \* Group + (1 | setid) + (1 | ParticipantID)

Data: tw\_AG\_C

Weights: WeightsBarr

Control: lmerControl(optimizer = "bobyqa", optCtrl = list(maxfun = 4e+06))

AIC BIC logLik deviance df.resid

13017.8 13059.8 -6501.9 13003.8 2976

Scaled residuals:

Min 1Q Median 3Q Max

-2.0064 -0.8032 -0.5755 -0.2515 4.0850

Random effects:

Groups Name Variance Std.Dev.

ParticipantID (Intercept) 0.01465 0.1210

setid (Intercept) 0.02807 0.1676

Residual 59.48127 7.7124

Number of obs: 2983, groups: ParticipantID, 43; setid, 18

Fixed effects:

Estimate Std. Error df t value Pr(>|t|)

(Intercept) -1.06920 0.05547 43.41573 -19.274 < 2e-16 \*\*\*

cond\_clean1 -0.22589 0.04298 2962.60791 -5.256 1.58e-07 \*\*\*

GroupNH -0.02199 0.05493 57.83770 -0.400 0.69036

cond\_clean1:GroupNH -0.20718 0.06325 2957.45223 -3.276 0.00107 \*\*

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Correlation of Fixed Effects:

(Intr) cnd\_c1 GropNH

cond\_clean1 -0.343

GroupNH -0.496 0.346

cnd\_cl1:GNH 0.232 -0.677 -0.464

**> anova(lmb, lm1)**

Data: tw\_AG\_C

Models:

lmb: Elog ~ cond\_clean + (1 | setid) + (1 | ParticipantID)

lm1: Elog ~ cond\_clean \* Group + (1 | setid) + (1 | ParticipantID)

Df AIC BIC logLik deviance Chisq Chi Df Pr(>Chisq)

lmb 5 13029 13059 -6509.4 13019

lm1 7 13018 13060 -6501.9 13004 14.926 2 0.0005739 \*\*\*

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

**> summary(lm2a)**

Linear mixed model fit by maximum likelihood . t-tests use Satterthwaite's method [lmerModLmerTest

]

Formula: Elog ~ cond\_clean \* Group \* PPVT\_GSV\_C + (1 | setid) + (1 | ParticipantID)

Data: tw\_AG\_C

Weights: WeightsBarr

Control: lmerControl(optimizer = "bobyqa", optCtrl = list(maxfun = 4e+06))

AIC BIC logLik deviance df.resid

13015.2 13081.2 -6496.6 12993.2 2972

Scaled residuals:

Min 1Q Median 3Q Max

-1.9726 -0.7898 -0.5755 -0.2500 4.0948

Random effects:

Groups Name Variance Std.Dev.

ParticipantID (Intercept) 0.01243 0.1115

setid (Intercept) 0.02825 0.1681

Residual 59.34330 7.7035

Number of obs: 2983, groups: ParticipantID, 43; setid, 18

Fixed effects:

Estimate Std. Error df t value Pr(>|t|)

(Intercept) -1.064e+00 5.658e-02 4.517e+01 -18.812 < 2e-16 \*\*\*

cond\_clean1 -2.805e-01 4.704e-02 2.961e+03 -5.962 2.79e-09 \*\*\*

GroupNH -2.285e-03 5.883e-02 5.664e+01 -0.039 0.9692

PPVT\_GSV\_C 4.321e-04 1.450e-03 5.746e+01 0.298 0.7668

cond\_clean1:GroupNH -1.550e-01 6.946e-02 2.954e+03 -2.232 0.0257 \*

cond\_clean1:PPVT\_GSV\_C -4.370e-03 1.605e-03 2.956e+03 -2.723 0.0065 \*\*

GroupNH:PPVT\_GSV\_C -2.703e-03 2.444e-03 5.651e+01 -1.106 0.2736

cond\_clean1:GroupNH:PPVT\_GSV\_C 4.352e-03 2.924e-03 2.957e+03 1.488 0.1367

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Correlation of Fixed Effects:

(Intr) cnd\_c1 GropNH PPVT\_G cn\_1:GNH c\_1:PP GNH:PP

cond\_clean1 -0.350

GroupNH -0.488 0.335

PPVT\_GSV\_C 0.262 -0.174 -0.252

cnd\_cl1:GNH 0.236 -0.675 -0.479 0.116

c\_1:PPVT\_GS -0.130 0.407 0.124 -0.518 -0.274

GNH:PPVT\_GS -0.156 0.103 -0.137 -0.594 0.064 0.308

c\_1:GNH:PPV 0.072 -0.222 0.064 0.285 -0.109 -0.549 -0.475

**> anova(lm1, lm2a)**

Data: tw\_AG\_C

Models:

lm1: Elog ~ cond\_clean \* Group + (1 | setid) + (1 | ParticipantID)

lm2a: Elog ~ cond\_clean \* Group \* PPVT\_GSV\_C + (1 | setid) + (1 | ParticipantID)

Df AIC BIC logLik deviance Chisq Chi Df Pr(>Chisq)

lm1 7 13018 13060 -6501.9 13004

lm2a 11 13015 13081 -6496.6 12993 10.622 4 0.03116 \*

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

**Cohort TW – with random slopes**

**> summary(lmb\_rs)**

Linear mixed model fit by maximum likelihood . t-tests use Satterthwaite's method [lmerModLmerTest

]

Formula: Elog ~ cond\_clean + (cond\_clean | setid) + (cond\_clean | ParticipantID)

Data: tw\_AG\_C

Weights: WeightsBarr

Control: lmerControl(optimizer = "bobyqa", optCtrl = list(maxfun = 4e+06))

AIC BIC logLik deviance df.resid

13008.3 13062.3 -6495.2 12990.3 2974

Scaled residuals:

Min 1Q Median 3Q Max

-2.0708 -0.7763 -0.5767 -0.2491 4.2583

Random effects:

Groups Name Variance Std.Dev. Corr

ParticipantID (Intercept) 0.01029 0.1014

cond\_clean1 0.03270 0.1808 0.13

setid (Intercept) 0.03631 0.1906

cond\_clean1 0.03391 0.1842 -0.51

Residual 58.37209 7.6402

Number of obs: 2983, groups: ParticipantID, 43; setid, 18

Fixed effects:

Estimate Std. Error df t value Pr(>|t|)

(Intercept) -1.07846 0.05169 21.73597 -20.863 7.28e-16 \*\*\*

cond\_clean1 -0.35217 0.06079 24.85308 -5.793 4.98e-06 \*\*\*

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Correlation of Fixed Effects:

(Intr)

cond\_clean1 -0.428

**> summary(lm1\_rs)**

Linear mixed model fit by maximum likelihood . t-tests use Satterthwaite's method [lmerModLmerTest

]

Formula: Elog ~ cond\_clean \* Group + (cond\_clean | setid) + (cond\_clean | ParticipantID)

Data: tw\_AG\_C

Weights: WeightsBarr

Control: lmerControl(optimizer = "bobyqa", optCtrl = list(maxfun = 4e+06))

AIC BIC logLik deviance df.resid

13003.2 13069.2 -6490.6 12981.2 2972

Scaled residuals:

Min 1Q Median 3Q Max

-2.0770 -0.7788 -0.5779 -0.2517 4.2538

Random effects:

Groups Name Variance Std.Dev. Corr

ParticipantID (Intercept) 0.009849 0.09924

cond\_clean1 0.023217 0.15237 -0.04

setid (Intercept) 0.036298 0.19052

cond\_clean1 0.034073 0.18459 -0.52

Residual 58.385934 7.64107

Number of obs: 2983, groups: ParticipantID, 43; setid, 18

Fixed effects:

Estimate Std. Error df t value Pr(>|t|)

(Intercept) -1.06367 0.05743 29.95413 -18.520 < 2e-16 \*\*\*

cond\_clean1 -0.24813 0.06978 32.34137 -3.556 0.00119 \*\*

GroupNH -0.02943 0.05037 33.23891 -0.584 0.56289

cond\_clean1:GroupNH -0.20903 0.07900 36.41542 -2.646 0.01195 \*

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Correlation of Fixed Effects:

(Intr) cnd\_c1 GropNH

cond\_clean1 -0.463

GroupNH -0.440 0.238

cnd\_cl1:GNH 0.185 -0.535 -0.417

> anova(lmb\_rs, lm1\_rs)

Data: tw\_AG\_C

Models:

lmb\_rs: Elog ~ cond\_clean + (cond\_clean | setid) + (cond\_clean | ParticipantID)

lm1\_rs: Elog ~ cond\_clean \* Group + (cond\_clean | setid) + (cond\_clean |

lm1\_rs: ParticipantID)

Df AIC BIC logLik deviance Chisq Chi Df Pr(>Chisq)

lmb\_rs 9 13008 13062 -6495.2 12990

lm1\_rs 11 13003 13069 -6490.6 12981 9.1444 2 0.01034 \*

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

**> summary(lm2a\_rs)**

Linear mixed model fit by maximum likelihood . t-tests use Satterthwaite's method [lmerModLmerTest

]

Formula: Elog ~ cond\_clean \* Group \* PPVT\_GSV\_C + (cond\_clean | setid) +

(cond\_clean | ParticipantID)

Data: tw\_AG\_C

Weights: WeightsBarr

Control: lmerControl(optimizer = "bobyqa", optCtrl = list(maxfun = 4e+06))

AIC BIC logLik deviance df.resid

13003.4 13093.4 -6486.7 12973.4 2968

Scaled residuals:

Min 1Q Median 3Q Max

-2.0546 -0.7857 -0.5785 -0.2530 4.2008

Random effects:

Groups Name Variance Std.Dev. Corr

ParticipantID (Intercept) 0.008488 0.09213

cond\_clean1 0.014378 0.11991 -0.01

setid (Intercept) 0.036187 0.19023

cond\_clean1 0.034881 0.18676 -0.51

Residual 58.414399 7.64293

Number of obs: 2983, groups: ParticipantID, 43; setid, 18

Fixed effects:

Estimate Std. Error df t value Pr(>|t|)

(Intercept) -1.0609918 0.0584248 31.0972000 -18.160 < 2e-16 \*\*\*

cond\_clean1 -0.2973361 0.0705580 32.0452079 -4.214 0.000191 \*\*\*

GroupNH -0.0065534 0.0544415 31.2329383 -0.120 0.904957

PPVT\_GSV\_C 0.0002067 0.0013434 32.1978090 0.154 0.878698

cond\_clean1:GroupNH -0.1572019 0.0810126 32.5555808 -1.940 0.061025 .

cond\_clean1:PPVT\_GSV\_C -0.0043478 0.0018985 27.8618943 -2.290 0.029797 \*

GroupNH:PPVT\_GSV\_C -0.0026169 0.0022634 31.4935264 -1.156 0.256305

cond\_clean1:GroupNH:PPVT\_GSV\_C 0.0043466 0.0033923 34.2503589 1.281 0.208696

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Correlation of Fixed Effects:

(Intr) cnd\_c1 GropNH PPVT\_G cn\_1:GNH c\_1:PP GNH:PP

cond\_clean1 -0.471

GroupNH -0.437 0.241

PPVT\_GSV\_C 0.233 -0.124 -0.249

cnd\_cl1:GNH 0.195 -0.527 -0.444 0.107

c\_1:PPVT\_GS -0.106 0.314 0.113 -0.472 -0.271

GNH:PPVT\_GS -0.139 0.074 -0.137 -0.595 0.060 0.281

c\_1:GNH:PPV 0.060 -0.173 0.059 0.265 -0.119 -0.560 -0.442

> anova(lm1\_rs, lm2a\_rs)

Data: tw\_AG\_C

Models:

lm1\_rs: Elog ~ cond\_clean \* Group + (cond\_clean | setid) + (cond\_clean |

lm1\_rs: ParticipantID)

lm2a\_rs: Elog ~ cond\_clean \* Group \* PPVT\_GSV\_C + (cond\_clean | setid) +

lm2a\_rs: (cond\_clean | ParticipantID)

Df AIC BIC logLik deviance Chisq Chi Df Pr(>Chisq)

lm1\_rs 11 13003 13069 -6490.6 12981

lm2a\_rs 15 13003 13093 -6486.7 12973 7.763 4 0.1007

**> summary(lm2b\_rs)**

Linear mixed model fit by maximum likelihood . t-tests use Satterthwaite's method [lmerModLmerTest

]

Formula: Elog ~ cond\_clean \* Group \* EVT\_GSV\_C + (cond\_clean | setid) +

(cond\_clean | ParticipantID)

Data: tw\_AG\_Cev

Weights: WeightsBarr

Control: lmerControl(optimizer = "bobyqa", optCtrl = list(maxfun = 4e+06))

AIC BIC logLik deviance df.resid

12756.3 12846.0 -6363.2 12726.3 2907

Scaled residuals:

Min 1Q Median 3Q Max

-2.0687 -0.7862 -0.5780 -0.2638 4.2292

Random effects:

Groups Name Variance Std.Dev. Corr

ParticipantID (Intercept) 0.009836 0.09918

cond\_clean1 0.015887 0.12604 -0.26

setid (Intercept) 0.035914 0.18951

cond\_clean1 0.032883 0.18134 -0.50

Residual 58.743834 7.66445

Number of obs: 2922, groups: ParticipantID, 42; setid, 18

Fixed effects:

Estimate Std. Error df t value Pr(>|t|)

(Intercept) -1.0720134 0.0590793 31.7721139 -18.145 < 2e-16 \*\*\*

cond\_clean1 -0.2908029 0.0706382 32.2731755 -4.117 0.000249 \*\*\*

GroupNH -0.0098413 0.0550390 30.2189397 -0.179 0.859283

EVT\_GSV\_C -0.0013470 0.0024837 29.4394342 -0.542 0.591678

cond\_clean1:GroupNH -0.1430292 0.0807587 31.8918152 -1.771 0.086107 .

cond\_clean1:EVT\_GSV\_C -0.0071987 0.0035013 26.7550508 -2.056 0.049660 \*

GroupNH:EVT\_GSV\_C -0.0007229 0.0035687 29.2509242 -0.203 0.840872

cond\_clean1:GroupNH:EVT\_GSV\_C 0.0026237 0.0051721 29.9009069 0.507 0.615679

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Correlation of Fixed Effects:

(Intr) cnd\_c1 GropNH EVT\_GS cn\_1:GNH c\_1:EV GNH:EV

cond\_clean1 -0.499

GroupNH -0.457 0.286

EVT\_GSV\_C 0.244 -0.148 -0.263

cnd\_cl1:GNH 0.233 -0.550 -0.509 0.130

c\_1:EVT\_GSV -0.126 0.326 0.136 -0.528 -0.285

GNH:EVT\_GSV -0.170 0.103 -0.006 -0.696 0.003 0.368

c\_1:GNH:EVT 0.086 -0.219 0.002 0.358 0.031 -0.678 -0.513

**> anova(lm1b\_rs, lm2b\_rs)**

Data: tw\_AG\_Cev

Models:

lm1b\_rs: Elog ~ cond\_clean \* Group + (cond\_clean | setid) + (cond\_clean |

lm1b\_rs: ParticipantID)

lm2b\_rs: Elog ~ cond\_clean \* Group \* EVT\_GSV\_C + (cond\_clean | setid) +

lm2b\_rs: (cond\_clean | ParticipantID)

Df AIC BIC logLik deviance Chisq Chi Df Pr(>Chisq)

lm1b\_rs 11 12759 12825 -6368.4 12737

lm2b\_rs 15 12756 12846 -6363.2 12726 10.468 4 0.03325 \*

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1