Supplement B

Reward sensitivity and internalizing symptoms during the transition to puberty: An examination of 9- and 10-year-olds in the ABCD Study.

Contents

Results for Sample 2

1—Internalizing~Puberty—

1.1 Model: CBCL internalizing factor ~ PDS

Females

```
##
## Family: gaussian
```

```
## Link function: identity
##
## Formula:
## cbcl_scr_syn_internal_r ~ PDS_score + race.ethnicity.5level +
##     interview_age + demo_race_hispanic
##
## Parametric coefficients:
##                             Estimate Std. Error t value Pr(>|t|)
## (Intercept)                  1.00435    1.81456   0.553   0.5800
## PDS_score                    0.78180    0.15854   4.931 8.69e-07 ***
## race.ethnicity.5levelBlack -0.25319    0.71823  -0.353   0.7245
## race.ethnicity.5levelMixed  1.22839    0.71864   1.709   0.0875 .
## race.ethnicity.5levelOther  0.39856    0.82932   0.481   0.6309
## race.ethnicity.5levelWhite  0.99113    0.66629   1.488   0.1370
## interview_age               0.01562    0.01471   1.062   0.2885
## demo_race_hispanic1         0.25310    0.32178   0.787   0.4316
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.0128
## lmer.REML =  16187  Scale est. = 17.323    n = 2620
```

Males

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_internal_r ~ PDS_score + race.ethnicity.5level +
##     interview_age + demo_race_hispanic
##
## Parametric coefficients:
##                             Estimate Std. Error t value Pr(>|t|)
## (Intercept)                 2.916514   1.836811   1.588 0.112440
## PDS_score                   0.668998   0.198120   3.377 0.000743 ***
## race.ethnicity.5levelBlack -0.774862   0.788636  -0.983 0.325920
## race.ethnicity.5levelMixed  0.474852   0.785132   0.605 0.545356
## race.ethnicity.5levelOther -0.839169   0.884062  -0.949 0.342590
## race.ethnicity.5levelWhite -0.009381   0.734578  -0.013 0.989812
## interview_age               0.010284   0.014072   0.731 0.464926
## demo_race_hispanic1         0.615472   0.322318   1.910 0.056296 .
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.00513
## lmer.REML =  17791  Scale est. = 15.892    n = 2845
```

1.2 Model: CBCL Anxious-Depressed ~ PDS

Females

```
##
```

```
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_anxdep_r ~ PDS_score + race.ethnicity.5level + interview_age +
##     demo_race_hispanic
##
## Parametric coefficients:
##                              Estimate Std. Error t value Pr(>|t|)
## (Intercept)                  1.108103   1.010173   1.097 0.272767
## PDS_score                    0.327885   0.088132   3.720 0.000203 ***
## race.ethnicity.5levelBlack -0.296592   0.397328  -0.746 0.455452
## race.ethnicity.5levelMixed  0.756457   0.398018   1.901 0.057470 .
## race.ethnicity.5levelOther  0.204912   0.459613   0.446 0.655753
## race.ethnicity.5levelWhite  0.584367   0.368865   1.584 0.113262
## interview_age               0.003237   0.008208   0.394 0.693331
## demo_race_hispanic1         0.074772   0.177107   0.422 0.672924
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.0128
## lmer.REML =  13136  Scale est. = 6.6266    n = 2620
```

Males

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_anxdep_r ~ PDS_score + race.ethnicity.5level + interview_age +
##     demo_race_hispanic
##
## Parametric coefficients:
##                              Estimate Std. Error t value Pr(>|t|)
## (Intercept)                  2.599640   1.022995   2.541  0.01110 *
## PDS_score                    0.285806   0.110323   2.591  0.00963 **
## race.ethnicity.5levelBlack -0.321560   0.433851  -0.741  0.45865
## race.ethnicity.5levelMixed  0.392497   0.432187   0.908  0.36387
## race.ethnicity.5levelOther -0.183938   0.488335  -0.377  0.70645
## race.ethnicity.5levelWhite  0.287702   0.404120   0.712  0.47657
## interview_age              -0.005896   0.007862  -0.750  0.45336
## demo_race_hispanic1         0.258338   0.177288   1.457  0.14518
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.00484
## lmer.REML =  14479  Scale est. = 6.5927    n = 2845
```

1.3 Model: CBCL Withdrawn-Depressed ~ PDS

Females

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_withdep_r ~ PDS_score + race.ethnicity.5level +
##     interview_age + demo_race_hispanic
##
## Parametric coefficients:
##                              Estimate Std. Error t value Pr(>|t|)
## (Intercept)                  0.264236   0.542461   0.487    0.626
## PDS_score                    0.222482   0.047112   4.722 2.45e-06 ***
## race.ethnicity.5levelBlack -0.192139   0.212400  -0.905    0.366
## race.ethnicity.5levelMixed -0.016699   0.212612  -0.079    0.937
## race.ethnicity.5levelOther -0.052069   0.245382  -0.212    0.832
## race.ethnicity.5levelWhite -0.104268   0.197265  -0.529    0.597
## interview_age                0.003147   0.004407   0.714    0.475
## demo_race_hispanic1          0.155883   0.094464   1.650    0.099 .
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =   0.01
## lmer.REML = 9892.2  Scale est. = 2.4029    n = 2620
```

Males

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_withdep_r ~ PDS_score + race.ethnicity.5level +
##     interview_age + demo_race_hispanic
##
## Parametric coefficients:
##                              Estimate Std. Error t value Pr(>|t|)
## (Intercept)                 -0.116765   0.604252  -0.193  0.84679
## PDS_score                    0.186099   0.065327   2.849  0.00442 **
## race.ethnicity.5levelBlack -0.163704   0.258403  -0.634  0.52644
## race.ethnicity.5levelMixed  0.003069   0.257628   0.012  0.99050
## race.ethnicity.5levelOther -0.193555   0.290579  -0.666  0.50540
## race.ethnicity.5levelWhite -0.219280   0.240916  -0.910  0.36280
## interview_age                0.009619   0.004640   2.073  0.03826 *
## demo_race_hispanic1          0.131680   0.104057   1.265  0.20581
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.0035
## lmer.REML =  11496  Scale est. = 1.9084    n = 2845
```

1.4 Model: CBCL Depressed DSM-5 ~ PDS

Females

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_dsm5_depress_r ~ PDS_score + race.ethnicity.5level +
##     interview_age + demo_race_hispanic
##
## Parametric coefficients:
##                              Estimate Std. Error t value Pr(>|t|)
## (Intercept)                  0.877508   0.632006   1.388  0.16512
## PDS_score                    0.192397   0.055287   3.480  0.00051 ***
## race.ethnicity.5levelBlack -0.076952   0.249336  -0.309  0.75763
## race.ethnicity.5levelMixed  0.219642   0.249929   0.879  0.37958
## race.ethnicity.5levelOther  0.024488   0.288648   0.085  0.93240
## race.ethnicity.5levelWhite  0.128716   0.231475   0.556  0.57821
## interview_age               -0.001469   0.005136  -0.286  0.77490
## demo_race_hispanic1          0.126429   0.111105   1.138  0.25525
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.0042
## lmer.REML =  10689  Scale est. = 2.2893    n = 2620
```

Males

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_dsm5_depress_r ~ PDS_score + race.ethnicity.5level +
##     interview_age + demo_race_hispanic
##
## Parametric coefficients:
##                              Estimate Std. Error t value Pr(>|t|)
## (Intercept)                  0.233652   0.701046   0.333   0.7389
## PDS_score                    0.155703   0.075749   2.056   0.0399 *
## race.ethnicity.5levelBlack -0.032645   0.300786  -0.109   0.9136
## race.ethnicity.5levelMixed  0.201438   0.299714   0.672   0.5016
## race.ethnicity.5levelOther -0.250785   0.337693  -0.743   0.4578
## race.ethnicity.5levelWhite -0.022856   0.280336  -0.082   0.9350
## interview_age                0.007708   0.005377   1.433   0.1519
## demo_race_hispanic1          0.145907   0.121775   1.198   0.2310
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.00214
## lmer.REML =  12335  Scale est. = 2.3675    n = 2845
```

1.5 Model: CBCL internalizing factor ~ Pubertal category

Females

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_internal_r ~ pds_p_ss_category + race.ethnicity.5level +
##     interview_age + demo_race_hispanic
##
## Parametric coefficients:
##                             Estimate Std. Error t value Pr(>|t|)
## (Intercept)                  1.29818    1.86143   0.697 0.485610
## pds_p_ss_categoryEarly       0.30134    0.28987   1.040 0.298645
## pds_p_ss_categoryLate        0.78997    0.69372   1.139 0.254914
## pds_p_ss_categoryMid         0.99238    0.26806   3.702 0.000218 ***
## race.ethnicity.5levelBlack -0.12030    0.71934  -0.167 0.867198
## race.ethnicity.5levelMixed   1.25918    0.72006   1.749 0.080456 .
## race.ethnicity.5levelOther   0.42346    0.83096   0.510 0.610371
## race.ethnicity.5levelWhite   1.00589    0.66757   1.507 0.131986
## interview_age                0.01957    0.01499   1.305 0.191958
## demo_race_hispanic1          0.19558    0.32298   0.606 0.544867
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.0091
## lmer.REML =  16196  Scale est. = 17.558    n = 2620
```

Males

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_internal_r ~ pds_p_ss_category + race.ethnicity.5level +
##     interview_age + demo_race_hispanic
##
## Parametric coefficients:
##                             Estimate Std. Error t value Pr(>|t|)
## (Intercept)                  3.17467    1.84243   1.723   0.0850 .
## pds_p_ss_categoryEarly       0.54530    0.25715   2.121   0.0340 *
## pds_p_ss_categoryLate        0.13229    1.51040   0.088   0.9302
## pds_p_ss_categoryMid         1.15880    0.47474   2.441   0.0147 *
## race.ethnicity.5levelBlack -0.67208    0.78857  -0.852   0.3941
## race.ethnicity.5levelMixed   0.54813    0.78620   0.697   0.4857
## race.ethnicity.5levelOther -0.80966    0.88486  -0.915   0.3603
## race.ethnicity.5levelWhite   0.08372    0.73582   0.114   0.9094
## interview_age                0.01334    0.01401   0.952   0.3410
## demo_race_hispanic1          0.59163    0.32336   1.830   0.0674 .
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

```
##
##
## R-sq.(adj) =  0.00371
## lmer.REML =  17790  Scale est. = 15.869    n = 2845
```

1.6 Model: CBCL Anxious-Depressed ~ Pubertal category

Females

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_anxdep_r ~ pds_p_ss_category + race.ethnicity.5level +
##     interview_age + demo_race_hispanic
##
## Parametric coefficients:
##                              Estimate Std. Error t value Pr(>|t|)
## (Intercept)                  1.119072   1.035379   1.081  0.27987
## pds_p_ss_categoryEarly       0.197344   0.161806   1.220  0.22272
## pds_p_ss_categoryLate        0.160095   0.387250   0.413  0.67934
## pds_p_ss_categoryMid         0.389693   0.149135   2.613  0.00903 **
## race.ethnicity.5levelBlack -0.212867   0.397768  -0.535  0.59259
## race.ethnicity.5levelMixed  0.774922   0.398616   1.944  0.05200 .
## race.ethnicity.5levelOther  0.218712   0.460309   0.475  0.63473
## race.ethnicity.5levelWhite  0.592456   0.369390   1.604  0.10886
## interview_age               0.005779   0.008357   0.692  0.48925
## demo_race_hispanic1         0.054532   0.177675   0.307  0.75893
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.0101
## lmer.REML =  13144  Scale est. = 6.6835    n = 2620
```

Males

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_anxdep_r ~ pds_p_ss_category + race.ethnicity.5level +
##     interview_age + demo_race_hispanic
##
## Parametric coefficients:
##                              Estimate Std. Error t value Pr(>|t|)
## (Intercept)                  2.687409   1.026074   2.619  0.00886 **
## pds_p_ss_categoryEarly       0.194061   0.143214   1.355  0.17551
## pds_p_ss_categoryLate       -0.138855   0.837828  -0.166  0.86838
## pds_p_ss_categoryMid         0.443593   0.264477   1.677  0.09361 .
## race.ethnicity.5levelBlack -0.263727   0.433894  -0.608  0.54336
## race.ethnicity.5levelMixed  0.421136   0.432782   0.973  0.33059
## race.ethnicity.5levelOther -0.170960   0.488787  -0.350  0.72654
```

```
## race.ethnicity.5levelWhite  0.322229   0.404845   0.796  0.42614
## interview_age              -0.004282   0.007828  -0.547  0.58446
## demo_race_hispanic1         0.252704   0.177898   1.420  0.15557
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.00332
## lmer.REML =  14480  Scale est. = 6.5953    n = 2845
```

1.7 Model: CBCL Withdrawn-Depressed ~ Pubertal category

Females

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_withdep_r ~ pds_p_ss_category + race.ethnicity.5level +
##     interview_age + demo_race_hispanic
##
## Parametric coefficients:
##                              Estimate Std. Error t value Pr(>|t|)
## (Intercept)                  0.418975   0.555757   0.754 0.450988
## pds_p_ss_categoryEarly       0.032612   0.086804   0.376 0.707168
## pds_p_ss_categoryLate        0.459686   0.207547   2.215 0.026856 *
## pds_p_ss_categoryMid         0.273222   0.079746   3.426 0.000622 ***
## race.ethnicity.5levelBlack -0.169202   0.212645  -0.796 0.426277
## race.ethnicity.5levelMixed -0.008629   0.212914  -0.041 0.967677
## race.ethnicity.5levelOther -0.045437   0.245728  -0.185 0.853315
## race.ethnicity.5levelWhite -0.098009   0.197526  -0.496 0.619808
## interview_age                0.003771   0.004484   0.841 0.400526
## demo_race_hispanic1          0.136455   0.094750   1.440 0.149941
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.0074
## lmer.REML = 9902.1  Scale est. = 2.4201    n = 2620
```

Males

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_withdep_r ~ pds_p_ss_category + race.ethnicity.5level +
##     interview_age + demo_race_hispanic
##
## Parametric coefficients:
##                              Estimate Std. Error t value Pr(>|t|)
## (Intercept)                 -0.049942   0.605632  -0.082   0.9343
## pds_p_ss_categoryEarly       0.133326   0.084727   1.574   0.1157
```

```
## pds_p_ss_categoryLate      -0.239646   0.496766  -0.482   0.6296
## pds_p_ss_categoryMid        0.423045   0.156482   2.703   0.0069 **
## race.ethnicity.5levelBlack -0.135176   0.258114  -0.524   0.6005
## race.ethnicity.5levelMixed  0.030948   0.257723   0.120   0.9044
## race.ethnicity.5levelOther -0.182826   0.290590  -0.629   0.5293
## race.ethnicity.5levelWhite -0.186501   0.241083  -0.774   0.4392
## interview_age               0.010469   0.004617   2.267   0.0234 *
## demo_race_hispanic1         0.122082   0.104223   1.171   0.2416
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.00376
## lmer.REML =  11496  Scale est. = 1.9188    n = 2845
```

1.8 Model: CBCL Depressed DSM-5 ~ Pubertal category

Females

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_dsm5_depress_r ~ pds_p_ss_category + race.ethnicity.5level +
##     interview_age + demo_race_hispanic
##
## Parametric coefficients:
##                              Estimate Std. Error t value Pr(>|t|)
## (Intercept)                 0.9682718  0.6476525   1.495   0.1350
## pds_p_ss_categoryEarly      0.0097474  0.1012280   0.096   0.9233
## pds_p_ss_categoryLate       0.3158399  0.2422368   1.304   0.1924
## pds_p_ss_categoryMid        0.2210179  0.0934547   2.365   0.0181 *
## race.ethnicity.5levelBlack -0.0494567  0.2494354  -0.198   0.8428
## race.ethnicity.5levelMixed  0.2280100  0.2501254   0.912   0.3621
## race.ethnicity.5levelOther  0.0302076  0.2888797   0.105   0.9167
## race.ethnicity.5levelWhite  0.1336232  0.2316532   0.577   0.5641
## interview_age              -0.0004703  0.0052282  -0.090   0.9283
## demo_race_hispanic1         0.1124883  0.1114040   1.010   0.3127
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.00221
## lmer.REML =  10696  Scale est. = 2.3302    n = 2620
```

Males

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_dsm5_depress_r ~ pds_p_ss_category + race.ethnicity.5level +
##     interview_age + demo_race_hispanic
```

```
##
## Parametric coefficients:
##                              Estimate Std. Error t value Pr(>|t|)
## (Intercept)                  0.321584   0.702747   0.458   0.6473
## pds_p_ss_categoryEarly       0.204077   0.098249   2.077   0.0379 *
## pds_p_ss_categoryLate        0.092273   0.576904   0.160   0.8729
## pds_p_ss_categoryMid         0.224454   0.181432   1.237   0.2161
## race.ethnicity.5levelBlack -0.015673   0.300551  -0.052   0.9584
## race.ethnicity.5levelMixed  0.212696   0.299914   0.709   0.4783
## race.ethnicity.5levelOther -0.245720   0.337777  -0.727   0.4670
## race.ethnicity.5levelWhite -0.001727   0.280616  -0.006   0.9951
## interview_age                0.008072   0.005351   1.508   0.1316
## demo_race_hispanic1          0.140084   0.122081   1.147   0.2513
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.00154
## lmer.REML =  12334  Scale est. = 2.3659    n = 2845
```

1.9 Model: CBCL internalizing factor ~ Testosterone

Females

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_internal_r ~ hormone_scr_ert_mean + race.ethnicity.5level +
##     interview_age + demo_race_hispanic
##
## Parametric coefficients:
##                              Estimate Std. Error t value Pr(>|t|)
## (Intercept)                 -0.855385   1.866170  -0.458  0.64673
## hormone_scr_ert_mean         0.006203   0.007005   0.886  0.37597
## race.ethnicity.5levelBlack   0.064913   0.725607   0.089  0.92872
## race.ethnicity.5levelMixed   1.367192   0.731022   1.870  0.06157 .
## race.ethnicity.5levelOther   0.392609   0.848930   0.462  0.64378
## race.ethnicity.5levelWhite   1.077302   0.675310   1.595  0.11078
## interview_age                0.039194   0.015051   2.604  0.00927 **
## demo_race_hispanic1          0.175791   0.333089   0.528  0.59771
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.0054
## lmer.REML =  14907  Scale est. = 17.56     n = 2409
```

Males

```
##
## Family: gaussian
## Link function: identity
##
```

```
## Formula:
## cbcl_scr_syn_internal_r ~ hormone_scr_ert_mean + race.ethnicity.5level +
##     interview_age + demo_race_hispanic
##
## Parametric coefficients:
##                              Estimate Std. Error t value Pr(>|t|)
## (Intercept)                  3.497010   1.870733   1.869   0.0617 .
## hormone_scr_ert_mean         0.011693   0.007561   1.546   0.1221
## race.ethnicity.5levelBlack -0.566671   0.807140  -0.702   0.4827
## race.ethnicity.5levelMixed  0.336170   0.806112   0.417   0.6767
## race.ethnicity.5levelOther -0.691495   0.905567  -0.764   0.4452
## race.ethnicity.5levelWhite  0.031784   0.753966   0.042   0.9664
## interview_age               0.009765   0.014342   0.681   0.4960
## demo_race_hispanic1         0.489737   0.331109   1.479   0.1392
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.000425
## lmer.REML =  16473  Scale est. = 14.451    n = 2641
```

1.10 Model: CBCL Anxious-Depressed ~ Testosterone

Females

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_anxdep_r ~ hormone_scr_ert_mean + race.ethnicity.5level +
##     interview_age + demo_race_hispanic
##
## Parametric coefficients:
##                              Estimate Std. Error t value Pr(>|t|)
## (Intercept)                  0.174384   1.042465   0.167   0.8672
## hormone_scr_ert_mean         0.001262   0.003915   0.322   0.7473
## race.ethnicity.5levelBlack -0.114074   0.402044  -0.284   0.7766
## race.ethnicity.5levelMixed  0.830810   0.405722   2.048   0.0407 *
## race.ethnicity.5levelOther  0.225983   0.471554   0.479   0.6318
## race.ethnicity.5levelWhite  0.606919   0.374555   1.620   0.1053
## interview_age               0.014736   0.008431   1.748   0.0806 .
## demo_race_hispanic1         0.043874   0.183674   0.239   0.8112
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.00894
## lmer.REML =  12117  Scale est. = 6.9666    n = 2409
```

Males

```
##
## Family: gaussian
## Link function: identity
```

```
##
## Formula:
## cbcl_scr_syn_anxdep_r ~ hormone_scr_ert_mean + race.ethnicity.5level +
##     interview_age + demo_race_hispanic
##
## Parametric coefficients:
##                              Estimate Std. Error t value Pr(>|t|)
## (Intercept)                  2.938380   1.041999   2.820  0.00484 **
## hormone_scr_ert_mean         0.005993   0.004206   1.425  0.15428
## race.ethnicity.5levelBlack -0.251594   0.444704  -0.566  0.57161
## race.ethnicity.5levelMixed  0.301570   0.444474   0.678  0.49752
## race.ethnicity.5levelOther -0.102131   0.500944  -0.204  0.83846
## race.ethnicity.5levelWhite  0.322479   0.415462   0.776  0.43770
## interview_age               -0.007270   0.008017  -0.907  0.36457
## demo_race_hispanic1          0.195852   0.182007   1.076  0.28200
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.00303
## lmer.REML =  13394  Scale est. = 5.9318    n = 2641
```

1.11 Model: CBCL Withdrawn-Depressed ~ Testosterone

Females

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_withdep_r ~ hormone_scr_ert_mean + race.ethnicity.5level +
##     interview_age + demo_race_hispanic
##
## Parametric coefficients:
##                              Estimate Std. Error t value Pr(>|t|)
## (Intercept)                 -0.049692   0.560922  -0.089   0.9294
## hormone_scr_ert_mean         0.004957   0.002102   2.358   0.0184 *
## race.ethnicity.5levelBlack -0.124909   0.215595  -0.579   0.5624
## race.ethnicity.5levelMixed  0.034579   0.217293   0.159   0.8736
## race.ethnicity.5levelOther -0.058102   0.252429  -0.230   0.8180
## race.ethnicity.5levelWhite -0.055997   0.200812  -0.279   0.7804
## interview_age                0.007040   0.004534   1.553   0.1207
## demo_race_hispanic1          0.159992   0.098448   1.625   0.1043
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.00293
## lmer.REML = 9138.4  Scale est. = 2.3918    n = 2409
```

Males

```
##
## Family: gaussian
```

```
## Link function: identity
##
## Formula:
## cbcl_scr_syn_withdep_r ~ hormone_scr_ert_mean + race.ethnicity.5level +
##     interview_age + demo_race_hispanic
##
## Parametric coefficients:
##                             Estimate Std. Error t value Pr(>|t|)
## (Intercept)                -0.123559   0.621293  -0.199   0.8424
## hormone_scr_ert_mean        0.005209   0.002507   2.078   0.0378 *
## race.ethnicity.5levelBlack -0.119226   0.266151  -0.448   0.6542
## race.ethnicity.5levelMixed -0.005024   0.266320  -0.019   0.9850
## race.ethnicity.5levelOther -0.127196   0.299928  -0.424   0.6715
## race.ethnicity.5levelWhite -0.197090   0.248907  -0.792   0.4285
## interview_age               0.010391   0.004781   2.173   0.0298 *
## demo_race_hispanic1         0.071573   0.107510   0.666   0.5056
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.00152
## lmer.REML =  10679  Scale est. = 1.9215    n = 2641
```

1.12 Model: CBCL Depressed DSM-5 ~ Testosterone

Females

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_dsm5_depress_r ~ hormone_scr_ert_mean + race.ethnicity.5level +
##     interview_age + demo_race_hispanic
##
## Parametric coefficients:
##                             Estimate Std. Error t value Pr(>|t|)
## (Intercept)                0.365180   0.652083   0.560    0.576
## hormone_scr_ert_mean       0.001599   0.002453   0.652    0.514
## race.ethnicity.5levelBlack 0.049492   0.252355   0.196    0.845
## race.ethnicity.5levelMixed 0.266956   0.254911   1.047    0.295
## race.ethnicity.5levelOther 0.068762   0.296312   0.232    0.817
## race.ethnicity.5levelWhite 0.187339   0.235156   0.797    0.426
## interview_age              0.004566   0.005274   0.866    0.387
## demo_race_hispanic1        0.105591   0.115240   0.916    0.360
##
##
## R-sq.(adj) =  -0.000791
## lmer.REML = 9868.9  Scale est. = 2.3706    n = 2409
```

Males

```
##
## Family: gaussian
## Link function: identity
```

```
##
## Formula:
## cbcl_scr_dsm5_depress_r ~ hormone_scr_ert_mean + race.ethnicity.5level +
##     interview_age + demo_race_hispanic
##
## Parametric coefficients:
##                              Estimate Std. Error t value Pr(>|t|)
## (Intercept)                  0.523536   0.713803   0.733    0.463
## hormone_scr_ert_mean         0.003956   0.002884   1.372    0.170
## race.ethnicity.5levelBlack   0.001248   0.307496   0.004    0.997
## race.ethnicity.5levelMixed   0.137961   0.307427   0.449    0.654
## race.ethnicity.5levelOther  -0.193303   0.345621  -0.559    0.576
## race.ethnicity.5levelWhite  -0.029246   0.287443  -0.102    0.919
## interview_age                0.006097   0.005482   1.112    0.266
## demo_race_hispanic1          0.097970   0.124996   0.784    0.433
##
##
## R-sq.(adj) =  -0.000291
## lmer.REML =  11406  Scale est. = 2.2006    n = 2641
```

1.13 Model: CBCL internalizing factor ~ Testosterone + PDS

Females

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_internal_r ~ hormone_scr_ert_mean + PDS_score +
##     race.ethnicity.5level + interview_age + demo_race_hispanic
##
## Parametric coefficients:
##                              Estimate Std. Error t value Pr(>|t|)
## (Intercept)                  0.342413   1.871973   0.183    0.855
## hormone_scr_ert_mean        -0.001808   0.007142  -0.253    0.800
## PDS_score                    0.858415   0.169573   5.062 4.46e-07 ***
## race.ethnicity.5levelBlack  -0.448141   0.728585  -0.615    0.539
## race.ethnicity.5levelMixed   1.191085   0.727651   1.637    0.102
## race.ethnicity.5levelOther   0.282552   0.844386   0.335    0.738
## race.ethnicity.5levelWhite   0.995086   0.671704   1.481    0.139
## interview_age                0.020778   0.015411   1.348    0.178
## demo_race_hispanic1          0.163060   0.331259   0.492    0.623
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.0147
## lmer.REML =  14884  Scale est. = 17.835    n = 2409
```

Males

```
##
## Family: gaussian
## Link function: identity
```

```
##
## Formula:
## cbcl_scr_syn_internal_r ~ hormone_scr_ert_mean + PDS_score +
##     race.ethnicity.5level + interview_age + demo_race_hispanic
##
## Parametric coefficients:
##                              Estimate Std. Error t value Pr(>|t|)
## (Intercept)                  3.451178   1.866662   1.849 0.064592 .
## hormone_scr_ert_mean         0.008712   0.007594   1.147 0.251378
## PDS_score                    0.720533   0.207643   3.470 0.000529 ***
## race.ethnicity.5levelBlack -0.870505   0.810331  -1.074 0.282806
## race.ethnicity.5levelMixed  0.309933   0.804542   0.385 0.700099
## race.ethnicity.5levelOther -0.725556   0.903798  -0.803 0.422171
## race.ethnicity.5levelWhite  0.036561   0.752452   0.049 0.961250
## interview_age                0.003236   0.014435   0.224 0.822623
## demo_race_hispanic1          0.450071   0.330475   1.362 0.173349
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.00371
## lmer.REML =  16462  Scale est. = 14.337    n = 2641
```

1.14 Model: CBCL internalizing factor ~ Testosterone + Pubertal category

Females

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_internal_r ~ hormone_scr_ert_mean + pds_p_ss_category +
##     race.ethnicity.5level + interview_age + demo_race_hispanic
##
## Parametric coefficients:
##                               Estimate Std. Error t value Pr(>|t|)
## (Intercept)                  0.8557681  1.9228693   0.445   0.6563
## hormone_scr_ert_mean         0.0003425  0.0071332   0.048   0.9617
## pds_p_ss_categoryEarly       0.3933989  0.3005232   1.309   0.1906
## pds_p_ss_categoryLate        0.8687929  0.7326478   1.186   0.2358
## pds_p_ss_categoryMid         1.1166251  0.2832008   3.943 8.28e-05 ***
## race.ethnicity.5levelBlack -0.3133195  0.7296392  -0.429   0.6677
## race.ethnicity.5levelMixed  1.2366700  0.7289531   1.697   0.0899 .
## race.ethnicity.5levelOther  0.3206729  0.8459695   0.379   0.7047
## race.ethnicity.5levelWhite  1.0239192  0.6728981   1.522   0.1282
## interview_age                0.0225179  0.0157527   1.429   0.1530
## demo_race_hispanic1          0.1015637  0.3326217   0.305   0.7601
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.0109
## lmer.REML =  14892  Scale est. = 18.205    n = 2409
```

Males

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_internal_r ~ hormone_scr_ert_mean + pds_p_ss_category +
##     race.ethnicity.5level + interview_age + demo_race_hispanic
##
## Parametric coefficients:
##                              Estimate Std. Error t value Pr(>|t|)
## (Intercept)                  3.795727   1.871851   2.028   0.0427 *
## hormone_scr_ert_mean         0.009975   0.007577   1.316   0.1882
## pds_p_ss_categoryEarly       0.583489   0.266090   2.193   0.0284 *
## pds_p_ss_categoryLate        1.747408   1.765071   0.990   0.3223
## pds_p_ss_categoryMid         1.089616   0.487741   2.234   0.0256 *
## race.ethnicity.5levelBlack -0.795951   0.810672  -0.982   0.3263
## race.ethnicity.5levelMixed  0.375724   0.805812   0.466   0.6411
## race.ethnicity.5levelOther -0.702173   0.904864  -0.776   0.4378
## race.ethnicity.5levelWhite  0.122598   0.754067   0.163   0.8709
## interview_age               0.005787   0.014398   0.402   0.6878
## demo_race_hispanic1         0.429175   0.331409   1.295   0.1954
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.00197
## lmer.REML =  16461  Scale est. = 14.342    n = 2641
```

1.15 Model: CBCL Anxious-Depressed ~ Testosterone + PDS

Females

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_anxdep_r ~ hormone_scr_ert_mean + PDS_score + race.ethnicity.5level +
##     interview_age + demo_race_hispanic
##
## Parametric coefficients:
##                              Estimate Std. Error t value Pr(>|t|)
## (Intercept)                  0.676640   1.047992   0.646 0.518566
## hormone_scr_ert_mean        -0.002159   0.004003  -0.539 0.589733
## PDS_score                    0.362799   0.094795   3.827 0.000133 ***
## race.ethnicity.5levelBlack -0.330779   0.404838  -0.817 0.413973
## race.ethnicity.5levelMixed  0.756457   0.404897   1.868 0.061846 .
## race.ethnicity.5levelOther  0.179155   0.470212   0.381 0.703230
## race.ethnicity.5levelWhite  0.571167   0.373553   1.529 0.126393
## interview_age               0.007008   0.008648   0.810 0.417827
## demo_race_hispanic1         0.037785   0.183185   0.206 0.836600
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

```
##
##
## R-sq.(adj) =  0.0135
## lmer.REML =  12105  Scale est. = 7.04      n = 2409
```

Males

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_anxdep_r ~ hormone_scr_ert_mean + PDS_score + race.ethnicity.5level +
##     interview_age + demo_race_hispanic
##
## Parametric coefficients:
##                              Estimate Std. Error t value Pr(>|t|)
## (Intercept)                  2.914526   1.040651   2.801  0.00514 **
## hormone_scr_ert_mean         0.004687   0.004227   1.109  0.26764
## PDS_score                    0.318151   0.115770   2.748  0.00603 **
## race.ethnicity.5levelBlack -0.382221   0.446820  -0.855  0.39239
## race.ethnicity.5levelMixed  0.293315   0.444019   0.661  0.50893
## race.ethnicity.5levelOther -0.114117   0.500420  -0.228  0.81963
## race.ethnicity.5levelWhite  0.327767   0.415026   0.790  0.42974
## interview_age              -0.010149   0.008075  -1.257  0.20892
## demo_race_hispanic1         0.178208   0.181776   0.980  0.32699
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.00501
## lmer.REML =  13389  Scale est. = 5.8896    n = 2641
```

1.16 Model: CBCL Anxious-Depressed ~ Testosterone + Pubertal category

Females

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_anxdep_r ~ hormone_scr_ert_mean + pds_p_ss_category +
##     race.ethnicity.5level + interview_age + demo_race_hispanic
##
## Parametric coefficients:
##                               Estimate Std. Error t value Pr(>|t|)
## (Intercept)                  0.7791112  1.0755659   0.724   0.4689
## hormone_scr_ert_mean        -0.0008758  0.0039961  -0.219   0.8266
## pds_p_ss_categoryEarly       0.2297358  0.1685985   1.363   0.1731
## pds_p_ss_categoryLate        0.1807508  0.4105624   0.440   0.6598
## pds_p_ss_categoryMid         0.4386130  0.1584967   2.767   0.0057 **
## race.ethnicity.5levelBlack -0.2448288  0.4053385  -0.604   0.5459
## race.ethnicity.5levelMixed  0.7824490  0.4055146   1.930   0.0538 .
## race.ethnicity.5levelOther  0.1977192  0.4709500   0.420   0.6746
```

```
## race.ethnicity.5levelWhite  0.5875329  0.3741000   1.571   0.1164
## interview_age               0.0085612  0.0088298   0.970   0.3324
## demo_race_hispanic1         0.0180341  0.1839019   0.098   0.9219
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.0106
## lmer.REML =  12113  Scale est. = 7.0992    n = 2409
```

Males

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_anxdep_r ~ hormone_scr_ert_mean + pds_p_ss_category +
##     race.ethnicity.5level + interview_age + demo_race_hispanic
##
## Parametric coefficients:
##                             Estimate Std. Error t value Pr(>|t|)
## (Intercept)                 3.048043   1.043566   2.921  0.00352 **
## hormone_scr_ert_mean        0.005348   0.004219   1.268  0.20509
## pds_p_ss_categoryEarly      0.220646   0.148370   1.487  0.13710
## pds_p_ss_categoryLate       0.531286   0.979546   0.542  0.58760
## pds_p_ss_categoryMid        0.422634   0.272101   1.553  0.12049
## race.ethnicity.5levelBlack -0.335280   0.447098  -0.750  0.45338
## race.ethnicity.5levelMixed  0.318909   0.444745   0.717  0.47340
## race.ethnicity.5levelOther -0.103180   0.501040  -0.206  0.83686
## race.ethnicity.5levelWhite  0.359172   0.415972   0.863  0.38797
## interview_age              -0.008767   0.008055  -1.088  0.27653
## demo_race_hispanic1         0.172386   0.182368   0.945  0.34461
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.00305
## lmer.REML =  13391  Scale est. = 5.8989    n = 2641
```

1.17 Model: CBCL Withdrawn-Depressed ~ Testosterone + PDS

Females

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_withdep_r ~ hormone_scr_ert_mean + PDS_score + race.ethnicity.5level +
##     interview_age + demo_race_hispanic
##
## Parametric coefficients:
##                             Estimate Std. Error t value Pr(>|t|)
## (Intercept)                 0.264555   0.563083   0.470    0.639
```

```
## hormone_scr_ert_mean        0.002833   0.002147   1.320    0.187
## PDS_score                   0.224695   0.050753   4.427 9.97e-06 ***
## race.ethnicity.5levelBlack -0.256632   0.216690  -1.184    0.236
## race.ethnicity.5levelMixed -0.008861   0.216562  -0.041    0.967
## race.ethnicity.5levelOther -0.085080   0.251403  -0.338    0.735
## race.ethnicity.5levelWhite -0.076689   0.199982  -0.383    0.701
## interview_age               0.002215   0.004646   0.477    0.634
## demo_race_hispanic1         0.157482   0.097957   1.608    0.108
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.0106
## lmer.REML =   9123  Scale est. = 2.4126    n = 2409
```

Males

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_withdep_r ~ hormone_scr_ert_mean + PDS_score + race.ethnicity.5level +
##     interview_age + demo_race_hispanic
##
## Parametric coefficients:
##                             Estimate Std. Error t value Pr(>|t|)
## (Intercept)                -0.137632   0.620641  -0.222   0.8245
## hormone_scr_ert_mean        0.004497   0.002520   1.785   0.0744 .
## PDS_score                   0.172618   0.069203   2.494   0.0127 *
## race.ethnicity.5levelBlack -0.191478   0.267557  -0.716   0.4743
## race.ethnicity.5levelMixed -0.010882   0.266133  -0.041   0.9674
## race.ethnicity.5levelOther -0.134493   0.299702  -0.449   0.6536
## race.ethnicity.5levelWhite -0.195478   0.248720  -0.786   0.4320
## interview_age               0.008849   0.004816   1.837   0.0663 .
## demo_race_hispanic1         0.061630   0.107403   0.574   0.5661
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.00284
## lmer.REML =  10676  Scale est. = 1.9035    n = 2641
```

1.18 Model: CBCL Withdrawn-Depressed ~ Testosterone + Pubertal category

Females

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_withdep_r ~ hormone_scr_ert_mean + pds_p_ss_category +
##     race.ethnicity.5level + interview_age + demo_race_hispanic
##
```

```
## Parametric coefficients:
##                              Estimate Std. Error t value Pr(>|t|)
## (Intercept)                  0.435598   0.577770   0.754  0.45097
## hormone_scr_ert_mean         0.003353   0.002144   1.564  0.11788
## pds_p_ss_categoryEarly       0.047294   0.090456   0.523  0.60113
## pds_p_ss_categoryLate        0.402736   0.219935   1.831  0.06720 .
## pds_p_ss_categoryMid         0.275000   0.084897   3.239  0.00122 **
## race.ethnicity.5levelBlack -0.231080   0.216989  -1.065  0.28701
## race.ethnicity.5levelMixed  0.003088   0.216906   0.014  0.98864
## race.ethnicity.5levelOther -0.073623   0.251809  -0.292  0.77002
## race.ethnicity.5levelWhite -0.067910   0.200279  -0.339  0.73458
## interview_age                0.002517   0.004742   0.531  0.59564
## demo_race_hispanic1          0.138990   0.098341   1.413  0.15768
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.00763
## lmer.REML =   9133  Scale est. = 2.4228    n = 2409
```

Males

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_withdep_r ~ hormone_scr_ert_mean + pds_p_ss_category +
##     race.ethnicity.5level + interview_age + demo_race_hispanic
##
## Parametric coefficients:
##                              Estimate Std. Error t value Pr(>|t|)
## (Intercept)                 -0.055526   0.621889  -0.089   0.9289
## hormone_scr_ert_mean         0.004801   0.002513   1.910   0.0562 .
## pds_p_ss_categoryEarly       0.127347   0.088604   1.437   0.1508
## pds_p_ss_categoryLate        0.116890   0.585942   0.199   0.8419
## pds_p_ss_categoryMid         0.370977   0.162537   2.282   0.0225 *
## race.ethnicity.5levelBlack -0.177132   0.267450  -0.662   0.5078
## race.ethnicity.5levelMixed  0.012386   0.266325   0.047   0.9629
## race.ethnicity.5levelOther -0.124521   0.299825  -0.415   0.6779
## race.ethnicity.5levelWhite -0.167256   0.249048  -0.672   0.5019
## interview_age                0.009404   0.004801   1.959   0.0503 .
## demo_race_hispanic1          0.052396   0.107585   0.487   0.6263
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.00264
## lmer.REML =  10677  Scale est. = 1.9113    n = 2641
```

1.19 Model: CBCL Depressed DSM-5 ~ Testosterone + PDS

Females

```
##
```

```
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_dsm5_depress_r ~ hormone_scr_ert_mean + PDS_score +
##     race.ethnicity.5level + interview_age + demo_race_hispanic
##
## Parametric coefficients:
##                              Estimate Std. Error t value Pr(>|t|)
## (Intercept)                 0.6460355  0.6558347   0.985 0.324695
## hormone_scr_ert_mean       -0.0002827  0.0025083  -0.113 0.910280
## PDS_score                   0.2031579  0.0595351   3.412 0.000655 ***
## race.ethnicity.5levelBlack -0.0729058  0.2543140  -0.287 0.774385
## race.ethnicity.5levelMixed  0.2254904  0.2546070   0.886 0.375900
## race.ethnicity.5levelOther  0.0420331  0.2957283   0.142 0.886986
## race.ethnicity.5levelWhite  0.1675795  0.2346831   0.714 0.475255
## interview_age               0.0002325  0.0054138   0.043 0.965748
## demo_race_hispanic1         0.1023451  0.1149749   0.890 0.373474
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.00332
## lmer.REML = 9861.1  Scale est. = 2.3708    n = 2409
```

Males

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_dsm5_depress_r ~ hormone_scr_ert_mean + PDS_score +
##     race.ethnicity.5level + interview_age + demo_race_hispanic
##
## Parametric coefficients:
##                             Estimate Std. Error t value Pr(>|t|)
## (Intercept)                 0.510692   0.713187   0.716   0.4740
## hormone_scr_ert_mean        0.003236   0.002900   1.116   0.2645
## PDS_score                   0.174851   0.079476   2.200   0.0279 *
## race.ethnicity.5levelBlack -0.071884   0.309169  -0.233   0.8162
## race.ethnicity.5levelMixed  0.131821   0.307265   0.429   0.6679
## race.ethnicity.5levelOther -0.201359   0.345431  -0.583   0.5600
## race.ethnicity.5levelWhite -0.027948   0.287272  -0.097   0.9225
## interview_age               0.004526   0.005524   0.819   0.4127
## demo_race_hispanic1         0.088193   0.124879   0.706   0.4801
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.000741
## lmer.REML =  11404  Scale est. = 2.1834    n = 2641
```

1.20 Model: CBCL Depressed DSM-5 ~ Testosterone + Pubertal category

Females

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_dsm5_depress_r ~ hormone_scr_ert_mean + pds_p_ss_category +
##     race.ethnicity.5level + interview_age + demo_race_hispanic
##
## Parametric coefficients:
##                              Estimate Std. Error t value Pr(>|t|)
## (Intercept)                 0.8106598  0.6728012   1.205  0.22836
## hormone_scr_ert_mean        0.0001381  0.0025021   0.055  0.95599
## pds_p_ss_categoryEarly      0.0492938  0.1055779   0.467  0.64062
## pds_p_ss_categoryLate       0.3461948  0.2572564   1.346  0.17852
## pds_p_ss_categoryMid        0.2601191  0.0993877   2.617  0.00892 **
## race.ethnicity.5levelBlack -0.0509616  0.2543593  -0.200  0.84122
## race.ethnicity.5levelMixed  0.2358067  0.2547330   0.926  0.35469
## race.ethnicity.5levelOther  0.0506706  0.2958991   0.171  0.86405
## race.ethnicity.5levelWhite  0.1747582  0.2347990   0.744  0.45677
## interview_age               0.0003926  0.0055252   0.071  0.94335
## demo_race_hispanic1         0.0859678  0.1153212   0.745  0.45606
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.00162
## lmer.REML = 9867.4  Scale est. = 2.4144    n = 2409
```

Males

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_dsm5_depress_r ~ hormone_scr_ert_mean + pds_p_ss_category +
##     race.ethnicity.5level + interview_age + demo_race_hispanic
##
## Parametric coefficients:
##                             Estimate Std. Error t value Pr(>|t|)
## (Intercept)                 0.628650   0.714496   0.880   0.3790
## hormone_scr_ert_mean        0.003371   0.002891   1.166   0.2437
## pds_p_ss_categoryEarly      0.238266   0.101734   2.342   0.0193 *
## pds_p_ss_categoryLate       0.712302   0.674447   1.056   0.2910
## pds_p_ss_categoryMid        0.167840   0.186544   0.900   0.3683
## race.ethnicity.5levelBlack -0.060758   0.309027  -0.197   0.8441
## race.ethnicity.5levelMixed  0.138569   0.307469   0.451   0.6523
## race.ethnicity.5levelOther -0.200015   0.345522  -0.579   0.5627
## race.ethnicity.5levelWhite -0.009879   0.287631  -0.034   0.9726
## interview_age               0.004783   0.005505   0.869   0.3850
## demo_race_hispanic1         0.084709   0.125147   0.677   0.4985
```

```
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.000197
## lmer.REML =  11403  Scale est. = 2.1784    n = 2641
```

2—Reward~Puberty—

2.1 Model: BIS-BAS-RR ~ PDS

Females

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## bisbas_ss_basm_rr_z ~ PDS_score + interview_age
##
## Parametric coefficients:
##                Estimate Std. Error t value Pr(>|t|)
## (Intercept)    0.424214   0.314340   1.350  0.17728
## PDS_score      0.075218   0.028002   2.686  0.00727 **
## interview_age -0.005045   0.002713  -1.859  0.06310 .
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.00417
## lmer.REML = 7604.2  Scale est. = 0.75362   n = 2683
```

Males

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## bisbas_ss_basm_rr_z ~ PDS_score + interview_age
##
## Parametric coefficients:
##                Estimate Std. Error t value Pr(>|t|)
## (Intercept)    0.115506   0.286732   0.403   0.6871
## PDS_score      0.069481   0.032804   2.118   0.0343 *
## interview_age -0.001230   0.002423  -0.508   0.6118
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.00131
## lmer.REML = 8047.3  Scale est. = 0.7764    n = 2906
```

2.2 Model : Reaction Time ~ PDS

Females

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## rt_diff_large_neutral_z ~ PDS_score + interview_age
##
## Parametric coefficients:
##                Estimate Std. Error t value Pr(>|t|)
## (Intercept)   -0.698797   0.318038  -2.197   0.0281 *
## PDS_score      0.019366   0.028585   0.678   0.4982
## interview_age  0.005860   0.002754   2.128   0.0335 *
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.00183
## lmer.REML = 6057.3  Scale est. = 0.75998   n = 2242
```

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## rt_diff_large_small_z ~ PDS_score + interview_age
##
## Parametric coefficients:
##                 Estimate Std. Error t value Pr(>|t|)
## (Intercept)   -0.5555040  0.3317065  -1.675   0.0941 .
## PDS_score      0.0009986  0.0298834   0.033   0.9733
## interview_age  0.0047315  0.0028702   1.648   0.0994 .
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.000456
## lmer.REML = 6221.6  Scale est. = 0.83787   n = 2242
```

Males

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## rt_diff_large_neutral_z ~ PDS_score + interview_age
##
## Parametric coefficients:
##                Estimate Std. Error t value Pr(>|t|)
## (Intercept)   -0.581559   0.302387  -1.923   0.0546 .
## PDS_score     -0.057182   0.035722  -1.601   0.1096
## interview_age  0.005337   0.002557   2.087   0.0370 *
```

```
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.00226
## lmer.REML = 6209.9  Scale est. = 0.75935   n = 2318
```

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## rt_diff_large_small_z ~ PDS_score + interview_age
##
## Parametric coefficients:
##                 Estimate Std. Error t value Pr(>|t|)
## (Intercept)    0.0319121  0.2986180   0.107    0.915
## PDS_score     -0.0126889  0.0351299  -0.361    0.718
## interview_age -0.0002895  0.0025251  -0.115    0.909
##
##
## R-sq.(adj) =  -0.000795
## lmer.REML = 6161.9  Scale est. = 0.8291    n = 2318
```

2.3 Model: Caudate Anticipation ~ PDS

Females

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## caudate_rvsn_ant_z ~ PDS_score + interview_age
##
## Parametric coefficients:
##                Estimate Std. Error t value Pr(>|t|)
## (Intercept)   -0.354322   0.315627  -1.123    0.262
## PDS_score     -0.027115   0.028254  -0.960    0.337
## interview_age  0.003233   0.002729   1.185    0.236
##
##
## R-sq.(adj) =  0.000154
## lmer.REML = 5413.7  Scale est. = 0.73298   n = 2071
```

Males

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## caudate_rvsn_ant_z ~ PDS_score + interview_age
##
## Parametric coefficients:
```

```
##               Estimate Std. Error t value Pr(>|t|)
## (Intercept)   -0.51255    0.32285  -1.588    0.113
## PDS_score      0.03469    0.03908   0.887    0.375
## interview_age  0.00392    0.00272   1.441    0.150
##
##
## R-sq.(adj) =  0.00028
## lmer.REML = 5534.9  Scale est. = 0.81709   n = 2059
```

2.4 Model B: Putamen Anticipation ~ PDS

Females

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## putamen_rvsn_ant_z ~ PDS_score + interview_age
##
## Parametric coefficients:
##                Estimate Std. Error t value Pr(>|t|)
## (Intercept)   -0.492088   0.313014  -1.572    0.116
## PDS_score     -0.010024   0.027981  -0.358    0.720
## interview_age  0.004141   0.002706   1.531    0.126
##
##
## R-sq.(adj) =  0.000294
## lmer.REML = 5384.4  Scale est. = 0.70432   n = 2071
```

Males

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## putamen_rvsn_ant_z ~ PDS_score + interview_age
##
## Parametric coefficients:
##                Estimate Std. Error t value Pr(>|t|)
## (Intercept)   -0.359661   0.313801  -1.146    0.252
## PDS_score     -0.004214   0.038041  -0.111    0.912
## interview_age  0.003216   0.002644   1.217    0.224
##
##
## R-sq.(adj) =  -0.000355
## lmer.REML =   5430  Scale est. = 0.65183   n = 2064
```

2.5 Model: Accumbens Anticipation ~ PDS

Females

```
##
## Family: gaussian
```

```
## Link function: identity
##
## Formula:
## accumbens_rvsn_ant_z ~ PDS_score + interview_age
##
## Parametric coefficients:
##                 Estimate Std. Error t value Pr(>|t|)
## (Intercept)    0.1374282  0.2480263   0.554    0.580
## PDS_score     -0.0319156  0.0221177  -1.443    0.149
## interview_age -0.0006455  0.0021450  -0.301    0.763
##
##
## R-sq.(adj) =  0.000265
## lmer.REML = 4425.7  Scale est. = 0.48435   n = 2066
```

Males

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## accumbens_rvsn_ant_z ~ PDS_score + interview_age
##
## Parametric coefficients:
##                Estimate Std. Error t value Pr(>|t|)
## (Intercept)    0.164387   0.253649   0.648    0.517
## PDS_score      0.021930   0.030516   0.719    0.472
## interview_age -0.001572   0.002137  -0.736    0.462
##
##
## R-sq.(adj) =  -0.000251
## lmer.REML = 4549.1  Scale est. = 0.43644   n = 2060
```

2.6 Model: Caudate Feedback ~ PDS

Females

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## caudate_posvsneg_feedback_z ~ PDS_score + interview_age
##
## Parametric coefficients:
##                Estimate Std. Error t value Pr(>|t|)
## (Intercept)   -0.010955   0.309581  -0.035    0.972
## PDS_score      0.037116   0.027726   1.339    0.181
## interview_age -0.000575   0.002675  -0.215    0.830
##
##
## R-sq.(adj) =  -0.000269
## lmer.REML = 5311.2  Scale est. = 0.61773   n = 2067
```

Males

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## caudate_posvsneg_feedback_z ~ PDS_score + interview_age
##
## Parametric coefficients:
##                 Estimate Std. Error t value Pr(>|t|)
## (Intercept)   -0.0084907  0.3152619  -0.027    0.979
## PDS_score     -0.0055288  0.0379833  -0.146    0.884
## interview_age  0.0002172  0.0026587   0.082    0.935
##
##
## R-sq.(adj) =  -0.00096
## lmer.REML = 5454.9  Scale est. = 0.82148   n = 2058
```

2.7 Model: Putamen Feedback ~ PDS

Females

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## putamen_posvsneg_feedback_z ~ PDS_score + interview_age
##
## Parametric coefficients:
##                Estimate Std. Error t value Pr(>|t|)
## (Intercept)    0.126483   0.305477   0.414    0.679
## PDS_score      0.035447   0.027397   1.294    0.196
## interview_age -0.001628   0.002635  -0.618    0.537
##
##
## R-sq.(adj) =  -0.000225
## lmer.REML = 5245.6  Scale est. = 0.6817    n = 2067
```

Males

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## putamen_posvsneg_feedback_z ~ PDS_score + interview_age
##
## Parametric coefficients:
##                Estimate Std. Error t value Pr(>|t|)
## (Intercept)    0.280091   0.313510   0.893    0.372
## PDS_score      0.023857   0.037698   0.633    0.527
## interview_age -0.002342   0.002639  -0.888    0.375
##
```

```
##
## R-sq.(adj) =  -0.00054
## lmer.REML = 5415.4  Scale est. = 0.75208   n = 2063
```

2.8 Model: Accumbens Feedback ~ PDS

Females

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## accumbens_posvsneg_feedback_z ~ PDS_score + interview_age
##
## Parametric coefficients:
##                Estimate Std. Error t value Pr(>|t|)
## (Intercept)   -0.370594   0.241795  -1.533    0.126
## PDS_score      0.011952   0.021694   0.551    0.582
## interview_age  0.002769   0.002090   1.325    0.185
##
##
## R-sq.(adj) =  0.000574
## lmer.REML = 4288.8  Scale est. = 0.43394   n = 2066
```

Males

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## accumbens_posvsneg_feedback_z ~ PDS_score + interview_age
##
## Parametric coefficients:
##                 Estimate Std. Error t value Pr(>|t|)
## (Intercept)    0.0020213  0.2569941   0.008    0.994
## PDS_score     -0.0309742  0.0310057  -0.999    0.318
## interview_age  0.0004582  0.0021641   0.212    0.832
##
##
## R-sq.(adj) =  -0.000175
## lmer.REML = 4590.2  Scale est. = 0.39554   n = 2063
```

2.9 Model: OFC Anticipation ~ PDS

Females

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## lOFC_rvsn_ant_z ~ PDS_score + interview_age
##
```

```
## Parametric coefficients:
##                 Estimate Std. Error t value Pr(>|t|)
## (Intercept)    0.0801892  0.2006050   0.400    0.689
## PDS_score     -0.0171588  0.0180734  -0.949    0.343
## interview_age -0.0004233  0.0017341  -0.244    0.807
##
##
## R-sq.(adj) =  -0.000415
## lmer.REML = 3499.7  Scale est. = 0.31577   n = 2058
```

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## mOFC_rvsn_ant_z ~ PDS_score + interview_age
##
## Parametric coefficients:
##                Estimate Std. Error t value Pr(>|t|)
## (Intercept)    0.203967   0.231252   0.882   0.3779
## PDS_score     -0.052075   0.020727  -2.512   0.0121 *
## interview_age -0.001062   0.001998  -0.531   0.5952
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.00257
## lmer.REML = 4086.2  Scale est. = 0.41983   n = 2059
```

Males

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## lOFC_rvsn_ant_z ~ PDS_score + interview_age
##
## Parametric coefficients:
##                Estimate Std. Error t value Pr(>|t|)
## (Intercept)   -0.430299   0.218848  -1.966   0.0494 *
## PDS_score      0.028632   0.026701   1.072   0.2837
## interview_age  0.003009   0.001844   1.632   0.1028
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.0015
## lmer.REML = 3904.8  Scale est. = 0.3435    n = 2050
```

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
```

```
## mOFC_rvsn_ant_z ~ PDS_score + interview_age
##
## Parametric coefficients:
##                Estimate Std. Error t value Pr(>|t|)
## (Intercept)   -0.182563   0.248071  -0.736    0.462
## PDS_score      0.061647   0.030155   2.044    0.041 *
## interview_age  0.000624   0.002093   0.298    0.766
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.00218
## lmer.REML = 4452.2  Scale est. = 0.44504   n = 2056
```

2.10 Model: OFC Feedback ~ PDS

Females

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## lOFC_posvsneg_feedback_z ~ PDS_score + interview_age
##
## Parametric coefficients:
##                 Estimate Std. Error t value Pr(>|t|)
## (Intercept)    0.0625161  0.1799161   0.347    0.728
## PDS_score      0.0085022  0.0161609   0.526    0.599
## interview_age -0.0009009  0.0015555  -0.579    0.563
##
##
## R-sq.(adj) =  -0.000829
## lmer.REML = 3071.4  Scale est. = 0.25421   n = 2067
```

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## mOFC_posvsneg_feedback_z ~ PDS_score + interview_age
##
## Parametric coefficients:
##                 Estimate Std. Error t value Pr(>|t|)
## (Intercept)   -0.0059040  0.2119441  -0.028    0.978
## PDS_score      0.0043212  0.0190101   0.227    0.820
## interview_age -0.0002242  0.0018349  -0.122    0.903
##
##
## R-sq.(adj) =  -0.000935
## lmer.REML = 3789.9  Scale est. = 0.33159   n = 2071
```

Males

```
##
```

```
## Family: gaussian
## Link function: identity
##
## Formula:
## lOFC_posvsneg_feedback_z ~ PDS_score + interview_age
##
## Parametric coefficients:
##                Estimate Std. Error t value Pr(>|t|)
## (Intercept)   -0.143264   0.190247  -0.753    0.452
## PDS_score     -0.018364   0.023129  -0.794    0.427
## interview_age  0.001470   0.001604   0.917    0.359
##
##
## R-sq.(adj) =  -0.000382
## lmer.REML = 3342.5  Scale est. = 0.22175   n = 2049
```

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## mOFC_posvsneg_feedback_z ~ PDS_score + interview_age
##
## Parametric coefficients:
##                 Estimate Std. Error t value Pr(>|t|)
## (Intercept)   -0.0474262  0.2248786  -0.211    0.833
## PDS_score     -0.0212195  0.0274023  -0.774    0.439
## interview_age  0.0008927  0.0018959   0.471    0.638
##
##
## R-sq.(adj) =  -0.000619
## lmer.REML = 4058.1  Scale est. = 0.32892   n = 2058
```

2.11 Model: Caudate Anticipation ~ Testosterone

Females

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## caudate_rvsn_ant_z ~ hormone_scr_ert_mean + interview_age
##
## Parametric coefficients:
##                       Estimate Std. Error t value Pr(>|t|)
## (Intercept)          -0.331449   0.327022  -1.014    0.311
## hormone_scr_ert_mean -0.001533   0.001263  -1.213    0.225
## interview_age         0.003171   0.002795   1.135    0.257
##
##
## R-sq.(adj) =  0.000349
## lmer.REML = 4991.7  Scale est. = 0.75377   n = 1907
```

Males

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## caudate_rvsn_ant_z ~ hormone_scr_ert_mean + interview_age
##
## Parametric coefficients:
##                       Estimate Std. Error t value Pr(>|t|)
## (Intercept)          -0.265880   0.329964  -0.806    0.420
## hormone_scr_ert_mean -0.001295   0.001466  -0.883    0.377
## interview_age         0.002638   0.002788   0.946    0.344
##
##
## R-sq.(adj) =  -0.000405
## lmer.REML = 5139.7  Scale est. = 0.7996    n = 1917
```

2.12 Model B: Putamen Anticipation ~ Testosterone

Females

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## putamen_rvsn_ant_z ~ hormone_scr_ert_mean + interview_age
##
## Parametric coefficients:
##                       Estimate Std. Error t value Pr(>|t|)
## (Intercept)          -0.381268   0.321834  -1.185    0.236
## hormone_scr_ert_mean -0.000192   0.001245  -0.154    0.877
## interview_age         0.003094   0.002751   1.125    0.261
##
##
## R-sq.(adj) =  -0.000274
## lmer.REML = 4931.4  Scale est. = 0.67821   n = 1905
```

Males

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## putamen_rvsn_ant_z ~ hormone_scr_ert_mean + interview_age
##
## Parametric coefficients:
##                       Estimate Std. Error t value Pr(>|t|)
## (Intercept)          -0.328190   0.324440  -1.012    0.312
## hormone_scr_ert_mean -0.002314   0.001445  -1.601    0.110
## interview_age         0.003511   0.002741   1.281    0.200
##
```

```
##
## R-sq.(adj) =  0.000406
## lmer.REML = 5069.1  Scale est. = 0.59871   n = 1917
```

2.13 Model: Accumbens Anticipation ~ Testosterone

Females

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## accumbens_rvsn_ant_z ~ hormone_scr_ert_mean + interview_age
##
## Parametric coefficients:
##                          Estimate Std. Error t value Pr(>|t|)
## (Intercept)            0.0999811  0.2558527   0.391    0.696
## hormone_scr_ert_mean -0.0004158  0.0009888  -0.421    0.674
## interview_age        -0.0006720  0.0021883  -0.307    0.759
##
##
## R-sq.(adj) =  -0.000894
## lmer.REML = 4060.6  Scale est. = 0.4233    n = 1901
```

Males

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## accumbens_rvsn_ant_z ~ hormone_scr_ert_mean + interview_age
##
## Parametric coefficients:
##                          Estimate Std. Error t value Pr(>|t|)
## (Intercept)            0.2111383  0.2607896   0.810    0.418
## hormone_scr_ert_mean -0.0004254  0.0011640  -0.365    0.715
## interview_age        -0.0015779  0.0022026  -0.716    0.474
##
##
## R-sq.(adj) =  -0.000889
## lmer.REML = 4223.1  Scale est. = 0.43027   n = 1911
```

2.14 Model: Caudate Feedback ~ Testosterone

Females

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## caudate_posvsneg_feedback_z ~ hormone_scr_ert_mean + interview_age
##
```

```
## Parametric coefficients:
##                         Estimate Std. Error t value Pr(>|t|)
## (Intercept)          -0.0884340  0.3173849  -0.279    0.781
## hormone_scr_ert_mean  0.0003856  0.0012260   0.315    0.753
## interview_age         0.0004997  0.0027122   0.184    0.854
##
##
## R-sq.(adj) =  -0.000963
## lmer.REML =   4849  Scale est. = 0.59772   n = 1901
```

Males

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## caudate_posvsneg_feedback_z ~ hormone_scr_ert_mean + interview_age
##
## Parametric coefficients:
##                         Estimate Std. Error t value Pr(>|t|)
## (Intercept)          -0.057344   0.325006  -0.176    0.860
## hormone_scr_ert_mean -0.002196   0.001429  -1.537    0.124
## interview_age         0.001097   0.002750   0.399    0.690
##
##
## R-sq.(adj) =  0.000205
## lmer.REML = 5077.2  Scale est. = 0.82507   n = 1910
```

2.15 Model: Putamen Feedback ~ Testosterone

Females

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## putamen_posvsneg_feedback_z ~ hormone_scr_ert_mean + interview_age
##
## Parametric coefficients:
##                         Estimate Std. Error t value Pr(>|t|)
## (Intercept)           0.186877   0.312380   0.598    0.550
## hormone_scr_ert_mean  0.000457   0.001207   0.379    0.705
## interview_age        -0.001756   0.002664  -0.659    0.510
##
##
## R-sq.(adj) =  -0.00103
## lmer.REML = 4789.3  Scale est. = 0.65976   n = 1904
```

Males

```
##
## Family: gaussian
## Link function: identity
```

```
##
## Formula:
## putamen_posvsneg_feedback_z ~ hormone_scr_ert_mean + interview_age
##
## Parametric coefficients:
##                       Estimate Std. Error t value Pr(>|t|)
## (Intercept)           0.261878   0.322810   0.811   0.4173
## hormone_scr_ert_mean -0.002733   0.001434  -1.906   0.0568 .
## interview_age        -0.001233   0.002719  -0.454   0.6502
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.000965
## lmer.REML = 5030.8  Scale est. = 0.76058   n = 1915
```

2.16 Model: Accumbens Feedback ~ Testosterone

Females

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## accumbens_posvsneg_feedback_z ~ hormone_scr_ert_mean + interview_age
##
## Parametric coefficients:
##                         Estimate Std. Error t value Pr(>|t|)
## (Intercept)          -3.609e-01  2.501e-01  -1.443    0.149
## hormone_scr_ert_mean  8.766e-06  9.658e-04   0.009    0.993
## interview_age         2.914e-03  2.136e-03   1.365    0.173
##
##
## R-sq.(adj) =  0.000316
## lmer.REML = 3943.2  Scale est. = 0.42807   n = 1900
```

Males

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## accumbens_posvsneg_feedback_z ~ hormone_scr_ert_mean + interview_age
##
## Parametric coefficients:
##                         Estimate Std. Error t value Pr(>|t|)
## (Intercept)           0.0113639  0.2639875   0.043    0.966
## hormone_scr_ert_mean -0.0014010  0.0011774  -1.190    0.234
## interview_age         0.0003557  0.0022244   0.160    0.873
##
##
## R-sq.(adj) =  0.000143
## lmer.REML = 4259.2  Scale est. = 0.44133   n = 1917
```

2.17 Model: OFC Anticipation ~ Testosterone

Females

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## lOFC_rvsn_ant_z ~ hormone_scr_ert_mean + interview_age
##
## Parametric coefficients:
##                         Estimate Std. Error t value Pr(>|t|)
## (Intercept)           0.1368392  0.2063384   0.663   0.5073
## hormone_scr_ert_mean  0.0015863  0.0007966   1.991   0.0466 *
## interview_age        -0.0015929  0.0017624  -0.904   0.3662
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.00096
## lmer.REML = 3200.9  Scale est. = 0.31099   n = 1894
```

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## mOFC_rvsn_ant_z ~ hormone_scr_ert_mean + interview_age
##
## Parametric coefficients:
##                         Estimate Std. Error t value Pr(>|t|)
## (Intercept)           0.3449714  0.2392035   1.442    0.149
## hormone_scr_ert_mean  0.0012793  0.0009213   1.389    0.165
## interview_age        -0.0033111  0.0020421  -1.621    0.105
##
##
## R-sq.(adj) =  0.000847
## lmer.REML = 3751.8  Scale est. = 0.41513   n = 1895
```

Males

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## lOFC_rvsn_ant_z ~ hormone_scr_ert_mean + interview_age
##
## Parametric coefficients:
##                         Estimate Std. Error t value Pr(>|t|)
## (Intercept)          -0.3826899  0.2248618  -1.702   0.0889 .
## hormone_scr_ert_mean -0.0015432  0.0009996  -1.544   0.1228
## interview_age         0.0033213  0.0018982   1.750   0.0803 .
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

```
##
##
## R-sq.(adj) =  0.000365
## lmer.REML = 3627.8  Scale est. = 0.33829   n = 1904
```

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## mOFC_rvsn_ant_z ~ hormone_scr_ert_mean + interview_age
##
## Parametric coefficients:
##                         Estimate Std. Error t value Pr(>|t|)
## (Intercept)          -0.0728577  0.2544480  -0.286    0.775
## hormone_scr_ert_mean -0.0001526  0.0011250  -0.136    0.892
## interview_age         0.0004157  0.0021526   0.193    0.847
##
##
## R-sq.(adj) =  -0.00112
## lmer.REML = 4121.9  Scale est. = 0.43941   n = 1908
```

2.18 Model: OFC Feedback ~ Testosterone

Females

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## lOFC_posvsneg_feedback_z ~ hormone_scr_ert_mean + interview_age
##
## Parametric coefficients:
##                         Estimate Std. Error t value Pr(>|t|)
## (Intercept)           0.0322220  0.1817395   0.177   0.8593
## hormone_scr_ert_mean  0.0015346  0.0007027   2.184   0.0291 *
## interview_age        -0.0009299  0.0015530  -0.599   0.5494
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.0016
## lmer.REML = 2743.8  Scale est. = 0.24369   n = 1900
```

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## mOFC_posvsneg_feedback_z ~ hormone_scr_ert_mean + interview_age
##
## Parametric coefficients:
##                         Estimate Std. Error t value Pr(>|t|)
## (Intercept)          -0.0399194  0.2172604  -0.184    0.854
## hormone_scr_ert_mean  0.0013479  0.0008409   1.603    0.109
```

```
## interview_age        -0.0002294  0.0018584  -0.123    0.902
##
##
## R-sq.(adj) =  0.000333
## lmer.REML =   3456  Scale est. = 0.34165   n = 1905
```

Males

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## lOFC_posvsneg_feedback_z ~ hormone_scr_ert_mean + interview_age
##
## Parametric coefficients:
##                         Estimate Std. Error t value Pr(>|t|)
## (Intercept)          -0.1116692  0.1963288  -0.569    0.570
## hormone_scr_ert_mean -0.0002585  0.0008706  -0.297    0.767
## interview_age         0.0010542  0.0016611   0.635    0.526
##
##
## R-sq.(adj) =  -0.000795
## lmer.REML = 3122.1  Scale est. = 0.22577   n = 1902
```

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## mOFC_posvsneg_feedback_z ~ hormone_scr_ert_mean + interview_age
##
## Parametric coefficients:
##                         Estimate Std. Error t value Pr(>|t|)
## (Intercept)          -0.0222175  0.2304648  -0.096    0.923
## hormone_scr_ert_mean -0.0006656  0.0010204  -0.652    0.514
## interview_age         0.0005767  0.0019502   0.296    0.767
##
##
## R-sq.(adj) =  -0.000841
## lmer.REML = 3753.5  Scale est. = 0.34369   n = 1908
```

2.19 Model: MID Reaction Time ~ Testosterone

Females

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## rt_diff_large_neutral_z ~ hormone_scr_ert_mean + interview_age
##
## Parametric coefficients:
##                         Estimate Std. Error t value Pr(>|t|)
```

```
## (Intercept)          -0.745679   0.330741  -2.255   0.0243 *
## hormone_scr_ert_mean -0.001240   0.001287  -0.963   0.3356
## interview_age         0.006871   0.002830   2.428   0.0153 *
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.00207
## lmer.REML = 5624.2  Scale est. = 0.7694    n = 2069
```

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## rt_diff_large_small_z ~ hormone_scr_ert_mean + interview_age
##
## Parametric coefficients:
##                       Estimate Std. Error t value Pr(>|t|)
## (Intercept)          -0.537210   0.343953  -1.562   0.1185
## hormone_scr_ert_mean -0.001082   0.001339  -0.808   0.4190
## interview_age         0.004932   0.002942   1.677   0.0938 .
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.000468
## lmer.REML = 5768.8  Scale est. = 0.86809   n = 2069
```

Males

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## rt_diff_large_neutral_z ~ hormone_scr_ert_mean + interview_age
##
## Parametric coefficients:
##                       Estimate Std. Error t value Pr(>|t|)
## (Intercept)          -0.531773   0.311599  -1.707   0.0880 .
## hormone_scr_ert_mean -0.001336   0.001371  -0.974   0.3301
## interview_age         0.004643   0.002638   1.760   0.0785 .
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.00114
## lmer.REML = 5800.8  Scale est. = 0.74475   n = 2162
```

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
```

```
## rt_diff_large_small_z ~ hormone_scr_ert_mean + interview_age
##
## Parametric coefficients:
##                         Estimate Std. Error t value Pr(>|t|)
## (Intercept)          -0.0460410  0.3083255  -0.149    0.881
## hormone_scr_ert_mean -0.0013774  0.0013440  -1.025    0.306
## interview_age         0.0005507  0.0026125   0.211    0.833
##
##
## R-sq.(adj) =  -0.000438
## lmer.REML = 5771.3  Scale est. = 0.83547   n = 2162
```

2.20 Model: BIS-BAS-RR ~ Testosterone

Females

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## bisbas_ss_basm_rr_z ~ hormone_scr_ert_mean + interview_age
##
## Parametric coefficients:
##                         Estimate Std. Error t value Pr(>|t|)
## (Intercept)           0.3730767  0.3251233   1.147    0.251
## hormone_scr_ert_mean  0.0006881  0.0012723   0.541    0.589
## interview_age        -0.0037271  0.0027748  -1.343    0.179
##
##
## R-sq.(adj) =  0.000906
## lmer.REML = 6993.2  Scale est. = 0.78969   n = 2467
```

Males

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## bisbas_ss_basm_rr_z ~ hormone_scr_ert_mean + interview_age
##
## Parametric coefficients:
##                         Estimate Std. Error t value Pr(>|t|)
## (Intercept)           0.017894   0.296012   0.060   0.9518
## hormone_scr_ert_mean -0.002440   0.001296  -1.883   0.0598 .
## interview_age         0.001111   0.002498   0.445   0.6564
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  -0.000323
## lmer.REML = 7480.4  Scale est. = 0.78536   n = 2699
```

3—Internalizing~Reward—

3.1 Model: CBCL internalizing factor ~ Nucleus Accumbens activity (anticipation stage)

Females

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_internal_r ~ accumbens_rvsn_ant_z + interview_age
##
## Parametric coefficients:
##                       Estimate Std. Error t value Pr(>|t|)
## (Intercept)            0.93807    1.89253   0.496   0.6202
## accumbens_rvsn_ant_z -0.25017    0.16587  -1.508   0.1317
## interview_age          0.03348    0.01579   2.120   0.0341 *
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.000946
## lmer.REML =  12780  Scale est. = 15.797    n = 2065
```

Males

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_internal_r ~ accumbens_rvsn_ant_z + interview_age
##
## Parametric coefficients:
##                       Estimate Std. Error t value Pr(>|t|)
## (Intercept)            2.66112    1.91239   1.392    0.164
## accumbens_rvsn_ant_z  0.02731    0.16422   0.166    0.868
## interview_age          0.01940    0.01592   1.219    0.223
##
##
## R-sq.(adj) =  -0.00141
## lmer.REML =  12866  Scale est. = 13.349    n = 2060
```

3.2 Model: CBCL internalizing factor ~ Caudate activity (anticipation stage)

Females

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_internal_r ~ caudate_rvsn_ant_z + interview_age
##
```

```
## Parametric coefficients:
##                     Estimate Std. Error t value Pr(>|t|)
## (Intercept)          1.23747    1.89544   0.653   0.5139
## caudate_rvsn_ant_z  0.03828    0.13153   0.291   0.7710
## interview_age        0.03104    0.01581   1.963   0.0498 *
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  -0.000229
## lmer.REML =  12819  Scale est. = 16.059    n = 2069
```

Males

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_internal_r ~ caudate_rvsn_ant_z + interview_age
##
## Parametric coefficients:
##                     Estimate Std. Error t value Pr(>|t|)
## (Intercept)          2.65338    1.91171   1.388    0.165
## caudate_rvsn_ant_z  0.15740    0.12910   1.219    0.223
## interview_age        0.01980    0.01593   1.243    0.214
##
##
## R-sq.(adj) =  -0.000981
## lmer.REML =  12905  Scale est. = 12.492    n = 2065
```

3.3 Model: CBCL internalizing factor ~ Putamen activity (anticipation stage)

Females

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_internal_r ~ putamen_rvsn_ant_z + interview_age
##
## Parametric coefficients:
##                     Estimate Std. Error t value Pr(>|t|)
## (Intercept)        1.055560   1.894179   0.557   0.5774
## putamen_rvsn_ant_z 0.002893   0.132368   0.022   0.9826
## interview_age      0.032556   0.015806   2.060   0.0395 *
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  -0.000189
## lmer.REML =  12818  Scale est. = 15.798    n = 2069
```

Males

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_internal_r ~ putamen_rvsn_ant_z + interview_age
##
## Parametric coefficients:
##                     Estimate Std. Error t value Pr(>|t|)
## (Intercept)         2.826785   1.915110   1.476    0.140
## putamen_rvsn_ant_z -0.008676   0.133533  -0.065    0.948
## interview_age       0.018274   0.015955   1.145    0.252
##
##
## R-sq.(adj) =  -0.00137
## lmer.REML =  12899  Scale est. = 12.555    n = 2064
```

3.4 Model: CBCL internalizing factor ~ Accumbens activity (feedback stage)

Females

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_internal_r ~ accumbens_posvsneg_feedback_z + interview_age
##
## Parametric coefficients:
##                               Estimate Std. Error t value Pr(>|t|)
## (Intercept)                    0.99988    1.89645   0.527   0.5981
## accumbens_posvsneg_feedback_z  0.19684    0.17181   1.146   0.2521
## interview_age                  0.03298    0.01582   2.085   0.0372 *
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.00028
## lmer.REML =  12781  Scale est. = 15.798    n = 2064
```

Males

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_internal_r ~ accumbens_posvsneg_feedback_z + interview_age
##
## Parametric coefficients:
##                               Estimate Std. Error t value Pr(>|t|)
## (Intercept)                    3.22030    1.92031   1.677   0.0937 .
## accumbens_posvsneg_feedback_z -0.21511    0.16484  -1.305   0.1920
```

```
## interview_age                  0.01519    0.01600   0.950   0.3424
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  -0.00061
## lmer.REML =  12898  Scale est. = 13.209    n = 2063
```

3.5 Model: CBCL internalizing factor ~ Caudate activity (feedback stage)

Females

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_internal_r ~ caudate_posvsneg_feedback_z + interview_age
##
## Parametric coefficients:
##                             Estimate Std. Error t value Pr(>|t|)
## (Intercept)                  0.99119    1.89617   0.523   0.6012
## caudate_posvsneg_feedback_z -0.03668    0.13461  -0.272   0.7853
## interview_age                0.03312    0.01582   2.094   0.0364 *
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  -0.000154
## lmer.REML =  12789  Scale est. = 15.852    n = 2065
```

Males

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_internal_r ~ caudate_posvsneg_feedback_z + interview_age
##
## Parametric coefficients:
##                             Estimate Std. Error t value Pr(>|t|)
## (Intercept)                  3.24793    1.92088   1.691    0.091 .
## caudate_posvsneg_feedback_z -0.15368    0.13267  -1.158    0.247
## interview_age                0.01478    0.01601   0.923    0.356
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  -0.000312
## lmer.REML =  12877  Scale est. = 13.985    n = 2058
```

3.6 Model: CBCL internalizing factor ~ Putamen activity (feedback stage)

Females

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_internal_r ~ putamen_posvsneg_feedback_z + interview_age
##
## Parametric coefficients:
##                              Estimate Std. Error t value Pr(>|t|)
## (Intercept)                   1.13313    1.89586   0.598   0.5501
## putamen_posvsneg_feedback_z -0.11704    0.13669  -0.856   0.3919
## interview_age                 0.03186    0.01582   2.014   0.0442 *
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.000199
## lmer.REML =  12792  Scale est. = 16.215    n = 2065
```

Males

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_internal_r ~ putamen_posvsneg_feedback_z + interview_age
##
## Parametric coefficients:
##                              Estimate Std. Error t value Pr(>|t|)
## (Intercept)                   3.16383    1.91978   1.648   0.0995 .
## putamen_posvsneg_feedback_z -0.03829    0.13449  -0.285   0.7759
## interview_age                 0.01554    0.01600   0.972   0.3313
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  -0.00122
## lmer.REML =  12912  Scale est. = 14.196    n = 2063
```

3.7 Model: CBCL internalizing factor ~ OFC activity (anticipation stage)

Females

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_internal_r ~ lOFC_rvsn_ant_z + interview_age
##
## Parametric coefficients:
```

```
##                 Estimate Std. Error t value Pr(>|t|)
## (Intercept)      1.00430    1.90118   0.528   0.5974
## lOFC_rvsn_ant_z  0.05371    0.20796   0.258   0.7962
## interview_age    0.03302    0.01586   2.082   0.0374 *
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  -8.98e-05
## lmer.REML =  12736  Scale est. = 15.567    n = 2056
```

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_internal_r ~ mOFC_rvsn_ant_z + interview_age
##
## Parametric coefficients:
##                 Estimate Std. Error t value Pr(>|t|)
## (Intercept)      0.82010    1.90148   0.431   0.6663
## mOFC_rvsn_ant_z  0.17691    0.17881   0.989   0.3226
## interview_age    0.03454    0.01587   2.177   0.0296 *
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.000336
## lmer.REML =  12741  Scale est. = 15.138    n = 2057
```

Males

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_internal_r ~ lOFC_rvsn_ant_z + interview_age
##
## Parametric coefficients:
##                 Estimate Std. Error t value Pr(>|t|)
## (Intercept)      2.45026    1.90224   1.288    0.198
## lOFC_rvsn_ant_z -0.12564    0.18771  -0.669    0.503
## interview_age    0.02112    0.01583   1.334    0.182
##
##
## R-sq.(adj) =  -0.00104
## lmer.REML =  12770  Scale est. = 12.306    n = 2050
```

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_internal_r ~ mOFC_rvsn_ant_z + interview_age
```

```
##
## Parametric coefficients:
##                 Estimate Std. Error t value Pr(>|t|)
## (Intercept)      2.34538    1.91032   1.228    0.220
## mOFC_rvsn_ant_z -0.14308    0.16520  -0.866    0.387
## interview_age    0.02204    0.01591   1.386    0.166
##
##
## R-sq.(adj) =  -0.000983
## lmer.REML =  12829  Scale est. = 12.283    n = 2056
```

3.8 Model: CBCL internalizing factor ~ OFC activity (feedback stage)

Females

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_internal_r ~ lOFC_posvsneg_feedback_z + interview_age
##
## Parametric coefficients:
##                           Estimate Std. Error t value Pr(>|t|)
## (Intercept)                0.98560    1.89246   0.521   0.6026
## lOFC_posvsneg_feedback_z -0.04673    0.23076  -0.203   0.8395
## interview_age              0.03302    0.01579   2.091   0.0366 *
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  -0.000146
## lmer.REML =  12779  Scale est. = 16.099    n = 2065
```

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_internal_r ~ mOFC_posvsneg_feedback_z + interview_age
##
## Parametric coefficients:
##                           Estimate Std. Error t value Pr(>|t|)
## (Intercept)                0.92801    1.89200   0.490   0.6238
## mOFC_posvsneg_feedback_z   0.20371    0.19485   1.046   0.2959
## interview_age              0.03360    0.01578   2.129   0.0334 *
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.000549
## lmer.REML =  12810  Scale est. = 15.903    n = 2069
```

Males

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_internal_r ~ lOFC_posvsneg_feedback_z + interview_age
##
## Parametric coefficients:
##                           Estimate Std. Error t value Pr(>|t|)
## (Intercept)               2.96298    1.91995   1.543    0.123
## lOFC_posvsneg_feedback_z  0.15402    0.22167   0.695    0.487
## interview_age             0.01726    0.01599   1.080    0.280
##
##
## R-sq.(adj) =  -0.00137
## lmer.REML =  12794  Scale est. = 13.396    n = 2049
```

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_internal_r ~ mOFC_posvsneg_feedback_z + interview_age
##
## Parametric coefficients:
##                           Estimate Std. Error t value Pr(>|t|)
## (Intercept)               2.91983    1.91198   1.527    0.127
## mOFC_posvsneg_feedback_z  0.05625    0.18611   0.302    0.763
## interview_age             0.01763    0.01593   1.107    0.269
##
##
## R-sq.(adj) =  -0.00132
## lmer.REML =  12845  Scale est. = 13.43     n = 2058
```

3.9 Model: CBCL internalizing factor ~ BIS-BAS-RR

Females

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_internal_r ~ bisbas_ss_basm_rr + interview_age
##
## Parametric coefficients:
##                    Estimate Std. Error t value Pr(>|t|)
## (Intercept)         1.21645    1.72886   0.704   0.4817
## bisbas_ss_basm_rr -0.02712    0.04321  -0.628   0.5303
## interview_age       0.03358    0.01401   2.398   0.0166 *
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
```

```
##
## R-sq.(adj) =  -0.000264
## lmer.REML =  16599  Scale est. = 17.025    n = 2681
```

Males

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_internal_r ~ bisbas_ss_basm_rr + interview_age
##
## Parametric coefficients:
##                    Estimate Std. Error t value Pr(>|t|)
## (Intercept)         3.03467    1.68960   1.796   0.0726 .
## bisbas_ss_basm_rr -0.06792    0.04399  -1.544   0.1227
## interview_age       0.02210    0.01370   1.613   0.1068
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  -0.000626
## lmer.REML =  18169  Scale est. = 15.591    n = 2906
```

3.10 Model: CBCL internalizing factor ~ MID Reaction Time

Females

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_internal_r ~ rt_diff_large_neutral_z + interview_age
##
## Parametric coefficients:
##                           Estimate Std. Error t value Pr(>|t|)
## (Intercept)               0.63889    1.83997   0.347   0.7285
## rt_diff_large_neutral_z   0.10524    0.12066   0.872   0.3832
## interview_age             0.03612    0.01535   2.354   0.0187 *
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.000301
## lmer.REML =  13881  Scale est. = 16.789    n = 2240
```

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_internal_r ~ rt_diff_large_small_z + interview_age
##
```

```
## Parametric coefficients:
##                       Estimate Std. Error t value Pr(>|t|)
## (Intercept)            0.64472    1.83859   0.351   0.7259
## rt_diff_large_small_z  0.15141    0.11655   1.299   0.1941
## interview_age          0.03610    0.01533   2.355   0.0186 *
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.0007
## lmer.REML =  13880  Scale est. = 16.808    n = 2240
```

Males

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_internal_r ~ rt_diff_large_neutral_z + interview_age
##
## Parametric coefficients:
##                          Estimate Std. Error t value Pr(>|t|)
## (Intercept)               2.13544    1.80453   1.183    0.237
## rt_diff_large_neutral_z -0.09316    0.12123  -0.768    0.442
## interview_age             0.02404    0.01503   1.599    0.110
##
##
## R-sq.(adj) =  -0.00104
## lmer.REML =  14471  Scale est. = 12.033    n = 2318
```

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_internal_r ~ rt_diff_large_small_z + interview_age
##
## Parametric coefficients:
##                       Estimate Std. Error t value Pr(>|t|)
## (Intercept)            2.17720    1.80291   1.208    0.227
## rt_diff_large_small_z -0.12580    0.12219  -1.029    0.303
## interview_age          0.02369    0.01502   1.577    0.115
##
##
## R-sq.(adj) =  -0.000768
## lmer.REML =  14470  Scale est. = 11.987    n = 2318
```

4—Internalizing~Puberty x Reward—

4.1 Model: CBCL internalizing factor ~ PDS x Accumbens activity (anticipation stage)

Females

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_internal_r ~ PDS_score * accumbens_rvsn_ant_z +
##     race.ethnicity.5level + demo_race_hispanic + interview_age
##
## Parametric coefficients:
##                                Estimate Std. Error t value Pr(>|t|)
## (Intercept)                     0.77200    2.04095   0.378    0.705
## PDS_score                       0.93801    0.17923   5.234 1.84e-07 ***
## accumbens_rvsn_ant_z            0.13655    0.41196   0.331    0.740
## race.ethnicity.5levelBlack     -0.31095    0.79209  -0.393    0.695
## race.ethnicity.5levelMixed      0.99979    0.78464   1.274    0.203
## race.ethnicity.5levelOther      0.31596    0.92933   0.340    0.734
## race.ethnicity.5levelWhite      1.14295    0.72391   1.579    0.115
## demo_race_hispanic1             0.10693    0.35665   0.300    0.764
## interview_age                   0.01433    0.01658   0.864    0.388
## PDS_score:accumbens_rvsn_ant_z -0.21652    0.22244  -0.973    0.330
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.0181
## lmer.REML =  12381  Scale est. = 15.847    n = 2010
```

Males

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_internal_r ~ PDS_score * accumbens_rvsn_ant_z +
##     race.ethnicity.5level + demo_race_hispanic + interview_age
##
## Parametric coefficients:
##                                Estimate Std. Error t value Pr(>|t|)
## (Intercept)                    2.455518   2.163755   1.135 0.256578
## PDS_score                      0.889234   0.243100   3.658 0.000261 ***
## accumbens_rvsn_ant_z           0.383249   0.411342   0.932 0.351601
## race.ethnicity.5levelBlack    -0.384489   0.998857  -0.385 0.700331
## race.ethnicity.5levelMixed     0.598120   0.989122   0.605 0.545448
## race.ethnicity.5levelOther    -0.775711   1.104137  -0.703 0.482418
## race.ethnicity.5levelWhite     0.225982   0.929938   0.243 0.808025
## demo_race_hispanic1            0.899102   0.377394   2.382 0.017293 *
## interview_age                  0.008367   0.016274   0.514 0.607236
```

```
## PDS_score:accumbens_rvsn_ant_z -0.270590   0.271708  -0.996 0.319426
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.00677
## lmer.REML =  12560  Scale est. = 13.505    n = 2014
```

4.2 Model: CBCL internalizing factor ~ PDS x Caudate activity (anticipation stage)

Females

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_internal_r ~ PDS_score * caudate_rvsn_ant_z + race.ethnicity.5level +
##     demo_race_hispanic + interview_age
##
## Parametric coefficients:
##                               Estimate Std. Error t value Pr(>|t|)
## (Intercept)                    0.95469    2.03804   0.468   0.6395
## PDS_score                      0.91368    0.17921   5.098 3.75e-07 ***
## caudate_rvsn_ant_z             0.74877    0.33308   2.248   0.0247 *
## race.ethnicity.5levelBlack    -0.24603    0.79297  -0.310   0.7564
## race.ethnicity.5levelMixed     1.03899    0.78470   1.324   0.1856
## race.ethnicity.5levelOther     0.36634    0.93107   0.393   0.6940
## race.ethnicity.5levelWhite     1.21556    0.72461   1.678   0.0936 .
## demo_race_hispanic1            0.10129    0.35622   0.284   0.7762
## interview_age                  0.01267    0.01657   0.765   0.4444
## PDS_score:caudate_rvsn_ant_z -0.44212    0.18304  -2.415   0.0158 *
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.0188
## lmer.REML =  12417  Scale est. = 16.384    n = 2014
```

Males

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_internal_r ~ PDS_score * caudate_rvsn_ant_z + race.ethnicity.5level +
##     demo_race_hispanic + interview_age
##
## Parametric coefficients:
##                               Estimate Std. Error t value Pr(>|t|)
## (Intercept)                   2.329478   2.163969   1.076 0.281840
## PDS_score                     0.893128   0.244906   3.647 0.000272 ***
## caudate_rvsn_ant_z           -0.084803   0.356195  -0.238 0.811843
```

```
## race.ethnicity.5levelBlack   -0.281789   1.001168  -0.281 0.778386
## race.ethnicity.5levelMixed    0.683120   0.991977   0.689 0.491126
## race.ethnicity.5levelOther   -0.859636   1.106710  -0.777 0.437398
## race.ethnicity.5levelWhite    0.294290   0.933555   0.315 0.752616
## demo_race_hispanic1           0.986004   0.380766   2.590 0.009680 **
## interview_age                 0.009087   0.016287   0.558 0.576943
## PDS_score:caudate_rvsn_ant_z  0.173998   0.245695   0.708 0.478913
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.00741
## lmer.REML =  12592  Scale est. = 12.577    n = 2018
```

4.3 Model: CBCL internalizing factor ~ PDS x Putamen activity (anticipation stage)

Females

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_internal_r ~ PDS_score * putamen_rvsn_ant_z + race.ethnicity.5level +
##     demo_race_hispanic + interview_age
##
## Parametric coefficients:
##                              Estimate Std. Error t value Pr(>|t|)
## (Intercept)                   0.85569    2.03719   0.420   0.6745
## PDS_score                     0.92594    0.17910   5.170 2.57e-07 ***
## putamen_rvsn_ant_z            0.51517    0.33779   1.525   0.1274
## race.ethnicity.5levelBlack   -0.27463    0.79368  -0.346   0.7294
## race.ethnicity.5levelMixed    1.01544    0.78561   1.293   0.1963
## race.ethnicity.5levelOther    0.31711    0.93009   0.341   0.7332
## race.ethnicity.5levelWhite    1.21262    0.72506   1.672   0.0946 .
## demo_race_hispanic1           0.09662    0.35647   0.271   0.7864
## interview_age                 0.01346    0.01656   0.813   0.4164
## PDS_score:putamen_rvsn_ant_z -0.33513    0.18396  -1.822   0.0686 .
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.018
## lmer.REML =  12418  Scale est. = 16.013    n = 2014
```

Males

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_internal_r ~ PDS_score * putamen_rvsn_ant_z + race.ethnicity.5level +
##     demo_race_hispanic + interview_age
```

```
##
## Parametric coefficients:
##                               Estimate Std. Error t value Pr(>|t|)
## (Intercept)                    2.53921    2.16562   1.173 0.241133
## PDS_score                      0.92368    0.24530   3.765 0.000171 ***
## putamen_rvsn_ant_z             0.28357    0.36927   0.768 0.442633
## race.ethnicity.5levelBlack    -0.36352    1.00110  -0.363 0.716553
## race.ethnicity.5levelMixed     0.67823    0.99153   0.684 0.494037
## race.ethnicity.5levelOther    -0.79158    1.10784  -0.715 0.474986
## race.ethnicity.5levelWhite     0.28345    0.93340   0.304 0.761410
## demo_race_hispanic1            0.92766    0.37746   2.458 0.014071 *
## interview_age                  0.00711    0.01630   0.436 0.662637
## PDS_score:putamen_rvsn_ant_z -0.23069    0.25278  -0.913 0.361574
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.0075
## lmer.REML =  12585  Scale est. = 12.574    n = 2017
```

4.4 Model: CBCL internalizing factor ~ PDS x Lateral OFC activity (anticipation stage)

Females

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_internal_r ~ PDS_score * lOFC_rvsn_ant_z + race.ethnicity.5level +
##     demo_race_hispanic + interview_age
##
## Parametric coefficients:
##                              Estimate Std. Error t value Pr(>|t|)
## (Intercept)                   0.54072    2.05077   0.264   0.7921
## PDS_score                     0.88175    0.18133   4.863 1.25e-06 ***
## lOFC_rvsn_ant_z               0.62047    0.49823   1.245   0.2132
## race.ethnicity.5levelBlack    0.03954    0.80302   0.049   0.9607
## race.ethnicity.5levelMixed    1.30077    0.79355   1.639   0.1013
## race.ethnicity.5levelOther    0.67842    0.93727   0.724   0.4693
## race.ethnicity.5levelWhite    1.46816    0.73318   2.002   0.0454 *
## demo_race_hispanic1           0.08453    0.35856   0.236   0.8136
## interview_age                 0.01455    0.01665   0.874   0.3822
## PDS_score:lOFC_rvsn_ant_z    -0.36763    0.27263  -1.348   0.1777
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.0157
## lmer.REML =  12340  Scale est. = 15.727    n = 2001
```

Males

```
##
```

```
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_internal_r ~ PDS_score * lOFC_rvsn_ant_z + race.ethnicity.5level +
##     demo_race_hispanic + interview_age
##
## Parametric coefficients:
##                             Estimate Std. Error t value Pr(>|t|)
## (Intercept)                  2.19443    2.15958   1.016  0.30969
## PDS_score                    0.78739    0.24505   3.213  0.00133 **
## lOFC_rvsn_ant_z             -0.06796    0.51328  -0.132  0.89468
## race.ethnicity.5levelBlack -0.45434    1.00652  -0.451  0.65175
## race.ethnicity.5levelMixed  0.67177    0.99634   0.674  0.50024
## race.ethnicity.5levelOther -0.87011    1.10587  -0.787  0.43149
## race.ethnicity.5levelWhite  0.22466    0.93808   0.239  0.81075
## demo_race_hispanic1         0.93966    0.37871   2.481  0.01318 *
## interview_age               0.01162    0.01619   0.718  0.47293
## PDS_score:lOFC_rvsn_ant_z  -0.05944    0.35126  -0.169  0.86565
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.00605
## lmer.REML =  12460  Scale est. = 12.451    n = 2003
```

4.5 Model: CBCL internalizing factor ~ PDS x Medial OFC activity (anticipation stage)

Females

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_internal_r ~ PDS_score * mOFC_rvsn_ant_z + race.ethnicity.5level +
##     demo_race_hispanic + interview_age
##
## Parametric coefficients:
##                             Estimate Std. Error t value Pr(>|t|)
## (Intercept)                  0.42146    2.04914   0.206   0.8371
## PDS_score                    0.88874    0.18142   4.899 1.04e-06 ***
## mOFC_rvsn_ant_z              0.71722    0.43302   1.656   0.0978 .
## race.ethnicity.5levelBlack  0.04807    0.80239   0.060   0.9522
## race.ethnicity.5levelMixed  1.30840    0.79473   1.646   0.0999 .
## race.ethnicity.5levelOther  0.69313    0.93547   0.741   0.4588
## race.ethnicity.5levelWhite  1.52006    0.73372   2.072   0.0384 *
## demo_race_hispanic1         0.07873    0.35818   0.220   0.8260
## interview_age               0.01508    0.01662   0.907   0.3645
## PDS_score:mOFC_rvsn_ant_z  -0.28976    0.23681  -1.224   0.2212
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
```

```
##
## R-sq.(adj) =  0.0171
## lmer.REML =  12345  Scale est. = 15.852    n = 2002
```

Males

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_internal_r ~ PDS_score * mOFC_rvsn_ant_z + race.ethnicity.5level +
##     demo_race_hispanic + interview_age
##
## Parametric coefficients:
##                              Estimate Std. Error t value Pr(>|t|)
## (Intercept)                   2.17056    2.16561   1.002 0.316327
## PDS_score                     0.88367    0.24506   3.606 0.000319 ***
## mOFC_rvsn_ant_z               0.57277    0.42423   1.350 0.177124
## race.ethnicity.5levelBlack -0.35509    1.00926  -0.352 0.725000
## race.ethnicity.5levelMixed  0.60786    0.99944   0.608 0.543123
## race.ethnicity.5levelOther -0.85975    1.11024  -0.774 0.438800
## race.ethnicity.5levelWhite  0.18778    0.94161   0.199 0.841951
## demo_race_hispanic1           0.90296    0.37838   2.386 0.017109 *
## interview_age                 0.01110    0.01625   0.683 0.494435
## PDS_score:mOFC_rvsn_ant_z  -0.56612    0.29454  -1.922 0.054742 .
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.0097
## lmer.REML =  12520  Scale est. = 12.473    n = 2010
```

4.6 Model: CBCL internalizing factor ~ PDS x Accumbens activity (feedback)

Females

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_internal_r ~ PDS_score * accumbens_posvsneg_feedback_z +
##     race.ethnicity.5level + demo_race_hispanic + interview_age
##
## Parametric coefficients:
##                                        Estimate Std. Error t value Pr(>|t|)
## (Intercept)                            0.732221   2.043733   0.358   0.7202
## PDS_score                              0.897986   0.180161   4.984 6.75e-07
## accumbens_posvsneg_feedback_z          0.258370   0.434089   0.595   0.5518
## race.ethnicity.5levelBlack            -0.009524   0.801237  -0.012   0.9905
## race.ethnicity.5levelMixed             1.305136   0.792490   1.647   0.0997
## race.ethnicity.5levelOther             0.607052   0.933486   0.650   0.5156
## race.ethnicity.5levelWhite             1.434905   0.731666   1.961   0.0500
## demo_race_hispanic1                    0.086535   0.358899   0.241   0.8095
```

```
## interview_age                              0.012923   0.016589   0.779   0.4361
## PDS_score:accumbens_posvsneg_feedback_z -0.034845   0.235193  -0.148   0.8822
##
## (Intercept)
## PDS_score                                ***
## accumbens_posvsneg_feedback_z
## race.ethnicity.5levelBlack
## race.ethnicity.5levelMixed               .
## race.ethnicity.5levelOther
## race.ethnicity.5levelWhite               .
## demo_race_hispanic1
## interview_age
## PDS_score:accumbens_posvsneg_feedback_z
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.0162
## lmer.REML =  12385  Scale est. = 15.95     n = 2009
```

Males

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_internal_r ~ PDS_score * accumbens_posvsneg_feedback_z +
##     race.ethnicity.5level + demo_race_hispanic + interview_age
##
## Parametric coefficients:
##                                          Estimate Std. Error t value Pr(>|t|)
## (Intercept)                              2.878751   2.177441   1.322 0.186292
## PDS_score                                0.911640   0.244066   3.735 0.000193
## accumbens_posvsneg_feedback_z            0.264996   0.468717   0.565 0.571888
## race.ethnicity.5levelBlack              -0.437580   1.012377  -0.432 0.665621
## race.ethnicity.5levelMixed               0.677955   1.003409   0.676 0.499340
## race.ethnicity.5levelOther              -0.851006   1.116987  -0.762 0.446224
## race.ethnicity.5levelWhite               0.273046   0.945801   0.289 0.772846
## demo_race_hispanic1                      0.908780   0.377558   2.407 0.016174
## interview_age                            0.004782   0.016360   0.292 0.770110
## PDS_score:accumbens_posvsneg_feedback_z -0.369607   0.335512  -1.102 0.270759
##
## (Intercept)
## PDS_score                                ***
## accumbens_posvsneg_feedback_z
## race.ethnicity.5levelBlack
## race.ethnicity.5levelMixed
## race.ethnicity.5levelOther
## race.ethnicity.5levelWhite
## demo_race_hispanic1                      *
## interview_age
## PDS_score:accumbens_posvsneg_feedback_z
## ---
```

```
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.00807
## lmer.REML =  12592  Scale est. = 13.357    n = 2017
```

4.7 Model: CBCL internalizing factor ~ PDS x Caudate activity (feedback)

Females

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_internal_r ~ PDS_score * caudate_posvsneg_feedback_z +
##     race.ethnicity.5level + demo_race_hispanic + interview_age
##
## Parametric coefficients:
##                                     Estimate Std. Error t value Pr(>|t|)
## (Intercept)                          0.79441    2.04022   0.389   0.6970
## PDS_score                            0.90585    0.17932   5.052 4.78e-07 ***
## caudate_posvsneg_feedback_z         -0.56189    0.33878  -1.659   0.0974 .
## race.ethnicity.5levelBlack          -0.08439    0.80103  -0.105   0.9161
## race.ethnicity.5levelMixed           1.21615    0.79183   1.536   0.1247
## race.ethnicity.5levelOther           0.51918    0.93338   0.556   0.5781
## race.ethnicity.5levelWhite           1.43132    0.73161   1.956   0.0506 .
## demo_race_hispanic1                  0.15113    0.35791   0.422   0.6729
## interview_age                        0.01242    0.01655   0.751   0.4529
## PDS_score:caudate_posvsneg_feedback_z  0.29937    0.18504   1.618   0.1059
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.0173
## lmer.REML =  12390  Scale est. = 15.498    n = 2010
```

Males

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_internal_r ~ PDS_score * caudate_posvsneg_feedback_z +
##     race.ethnicity.5level + demo_race_hispanic + interview_age
##
## Parametric coefficients:
##                                     Estimate Std. Error t value Pr(>|t|)
## (Intercept)                         2.976186   2.175613   1.368 0.171473
## PDS_score                           0.880627   0.244980   3.595 0.000333 ***
## caudate_posvsneg_feedback_z         0.228050   0.381493   0.598 0.550053
## race.ethnicity.5levelBlack         -0.386586   1.002390  -0.386 0.699786
## race.ethnicity.5levelMixed          0.667064   0.991895   0.673 0.501334
## race.ethnicity.5levelOther         -0.864330   1.106582  -0.781 0.434847
```

```
## race.ethnicity.5levelWhite             0.243423   0.934196   0.261 0.794451
## demo_race_hispanic1                    0.911520   0.376542   2.421 0.015576 *
## interview_age                          0.004248   0.016378   0.259 0.795363
## PDS_score:caudate_posvsneg_feedback_z -0.253038   0.269833  -0.938 0.348481
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.00699
## lmer.REML =  12559  Scale est. = 13.907    n = 2010
```

4.8 Model: CBCL internalizing factor ~ PDS x Putamen activity (feedback)

Females

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_internal_r ~ PDS_score * putamen_posvsneg_feedback_z +
##     race.ethnicity.5level + demo_race_hispanic + interview_age
##
## Parametric coefficients:
##                                    Estimate Std. Error t value Pr(>|t|)
## (Intercept)                         1.16888    2.03565   0.574    0.566
## PDS_score                           0.95437    0.17954   5.316 1.18e-07 ***
## putamen_posvsneg_feedback_z        -0.56731    0.34726  -1.634    0.102
## race.ethnicity.5levelBlack         -0.32326    0.79406  -0.407    0.684
## race.ethnicity.5levelMixed          1.04020    0.78627   1.323    0.186
## race.ethnicity.5levelOther          0.28592    0.93012   0.307    0.759
## race.ethnicity.5levelWhite          1.21883    0.72519   1.681    0.093 .
## demo_race_hispanic1                 0.11739    0.35894   0.327    0.744
## interview_age                       0.01033    0.01654   0.624    0.533
## PDS_score:putamen_posvsneg_feedback_z  0.28452    0.18772   1.516    0.130
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.0176
## lmer.REML =  12393  Scale est. = 15.793    n = 2010
```

Males

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_internal_r ~ PDS_score * putamen_posvsneg_feedback_z +
##     race.ethnicity.5level + demo_race_hispanic + interview_age
##
## Parametric coefficients:
##                                    Estimate Std. Error t value Pr(>|t|)
## (Intercept)                        2.938805   2.176406   1.350  0.17707
```

```
## PDS_score                                0.865453   0.245811   3.521  0.00044 ***
## putamen_posvsneg_feedback_z              0.118559   0.374689   0.316  0.75172
## race.ethnicity.5levelBlack              -0.327828   1.003221  -0.327  0.74387
## race.ethnicity.5levelMixed               0.695975   0.992645   0.701  0.48330
## race.ethnicity.5levelOther              -0.837104   1.107351  -0.756  0.44977
## race.ethnicity.5levelWhite               0.273448   0.934434   0.293  0.76983
## demo_race_hispanic1                      0.857657   0.377115   2.274  0.02306 *
## interview_age                            0.004621   0.016382   0.282  0.77794
## PDS_score:putamen_posvsneg_feedback_z -0.097198   0.261328  -0.372  0.70998
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.00649
## lmer.REML =  12596  Scale est. = 14.374    n = 2015
```

4.9 Model: CBCL internalizing factor ~ PDS x Lateral OFC activity (feedback stage)

Females

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_internal_r ~ PDS_score * lOFC_posvsneg_feedback_z +
##     race.ethnicity.5level + demo_race_hispanic + interview_age
##
## Parametric coefficients:
##                                  Estimate Std. Error t value Pr(>|t|)
## (Intercept)                       0.92701    2.03846   0.455    0.649
## PDS_score                         0.86852    0.18074   4.805 1.66e-06 ***
## lOFC_posvsneg_feedback_z         -0.31213    0.56443  -0.553    0.580
## race.ethnicity.5levelBlack       -0.19693    0.79360  -0.248    0.804
## race.ethnicity.5levelMixed        0.98903    0.78500   1.260    0.208
## race.ethnicity.5levelOther        0.28542    0.92850   0.307    0.759
## race.ethnicity.5levelWhite        1.18368    0.72395   1.635    0.102
## demo_race_hispanic1               0.12639    0.35805   0.353    0.724
## interview_age                     0.01364    0.01659   0.822    0.411
## PDS_score:lOFC_posvsneg_feedback_z  0.17292    0.30096   0.575    0.566
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.0137
## lmer.REML =  12386  Scale est. = 16.122    n = 2010
```

Males

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
```

```
## cbcl_scr_syn_internal_r ~ PDS_score * lOFC_posvsneg_feedback_z +
##     race.ethnicity.5level + demo_race_hispanic + interview_age
##
## Parametric coefficients:
##                                  Estimate Std. Error t value Pr(>|t|)
## (Intercept)                      2.781066   2.173804   1.279 0.200921
## PDS_score                        0.836270   0.245885   3.401 0.000684 ***
## lOFC_posvsneg_feedback_z        -0.033326   0.566396  -0.059 0.953087
## race.ethnicity.5levelBlack      -0.392572   1.011038  -0.388 0.697846
## race.ethnicity.5levelMixed       0.644283   1.000982   0.644 0.519876
## race.ethnicity.5levelOther      -0.900011   1.112141  -0.809 0.418462
## race.ethnicity.5levelWhite       0.249360   0.941656   0.265 0.791184
## demo_race_hispanic1              0.913767   0.379284   2.409 0.016078 *
## interview_age                    0.006473   0.016337   0.396 0.692002
## PDS_score:lOFC_posvsneg_feedback_z  0.168492   0.381253   0.442 0.658580
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.00623
## lmer.REML =  12489  Scale est. = 13.559    n = 2003
```

4.10 Model: CBCL internalizing factor ~ PDS x Medial OFC activity (feedback stage)

Females

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_internal_r ~ PDS_score * mOFC_posvsneg_feedback_z +
##     race.ethnicity.5level + demo_race_hispanic + interview_age
##
## Parametric coefficients:
##                                 Estimate Std. Error t value Pr(>|t|)
## (Intercept)                      0.74223    2.03903   0.364   0.7159
## PDS_score                        0.89080    0.18011   4.946 8.21e-07 ***
## mOFC_posvsneg_feedback_z        -0.49262    0.48540  -1.015   0.3103
## race.ethnicity.5levelBlack       0.05135    0.80109   0.064   0.9489
## race.ethnicity.5levelMixed       1.27777    0.79211   1.613   0.1069
## race.ethnicity.5levelOther       0.52956    0.93373   0.567   0.5707
## race.ethnicity.5levelWhite       1.44839    0.73158   1.980   0.0479 *
## demo_race_hispanic1              0.09621    0.35804   0.269   0.7882
## interview_age                    0.01285    0.01655   0.776   0.4377
## PDS_score:mOFC_posvsneg_feedback_z  0.44003    0.25859   1.702   0.0890 .
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.0172
## lmer.REML =  12411  Scale est. = 15.619    n = 2014
```

Males

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_internal_r ~ PDS_score * mOFC_posvsneg_feedback_z +
##     race.ethnicity.5level + demo_race_hispanic + interview_age
##
## Parametric coefficients:
##                                    Estimate Std. Error t value Pr(>|t|)
## (Intercept)                        2.720835   2.167351   1.255 0.209490
## PDS_score                          0.840753   0.244719   3.436 0.000603 ***
## mOFC_posvsneg_feedback_z          -0.073848   0.485874  -0.152 0.879210
## race.ethnicity.5levelBlack        -0.413100   1.008785  -0.410 0.682214
## race.ethnicity.5levelMixed         0.683753   0.998355   0.685 0.493499
## race.ethnicity.5levelOther        -0.865858   1.109137  -0.781 0.435095
## race.ethnicity.5levelWhite         0.257823   0.939937   0.274 0.783884
## demo_race_hispanic1                0.907199   0.376347   2.411 0.016019 *
## interview_age                      0.006855   0.016289   0.421 0.673917
## PDS_score:mOFC_posvsneg_feedback_z 0.113739   0.334080   0.340 0.733549
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.00642
## lmer.REML =  12540  Scale est. = 13.606    n = 2012
```

4.11 Model: CBCL internalizing factor ~ PDS x BIS-BAS

Females

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_internal_r ~ PDS_score * bisbas_ss_basm_rr + race.ethnicity.5level +
##     demo_race_hispanic + interview_age
##
## Parametric coefficients:
##                              Estimate Std. Error t value Pr(>|t|)
## (Intercept)                 -0.82007    2.00463  -0.409  0.68251
## PDS_score                    2.07922    0.54268   3.831  0.00013 ***
## bisbas_ss_basm_rr            0.22482    0.10746   2.092  0.03653 *
## race.ethnicity.5levelBlack  -0.20759    0.71808  -0.289  0.77253
## race.ethnicity.5levelMixed   1.23262    0.71707   1.719  0.08574 .
## race.ethnicity.5levelOther   0.33424    0.82728   0.404  0.68623
## race.ethnicity.5levelWhite   0.98373    0.66399   1.482  0.13858
## demo_race_hispanic1          0.25986    0.32109   0.809  0.41842
## interview_age                0.01402    0.01471   0.953  0.34071
## PDS_score:bisbas_ss_basm_rr -0.14543    0.05856  -2.484  0.01307 *
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

```
##
##
## R-sq.(adj) =  0.0143
## lmer.REML =  16130  Scale est. = 17.079    n = 2613
```

Males

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_internal_r ~ PDS_score * bisbas_ss_basm_rr + race.ethnicity.5level +
##     demo_race_hispanic + interview_age
##
## Parametric coefficients:
##                              Estimate Std. Error t value Pr(>|t|)
## (Intercept)                   2.48400    2.11797   1.173   0.2410
## PDS_score                     1.32053    0.78208   1.688   0.0914 .
## bisbas_ss_basm_rr             0.02346    0.11928   0.197   0.8441
## race.ethnicity.5levelBlack   -0.84910    0.78892  -1.076   0.2819
## race.ethnicity.5levelMixed    0.46370    0.78388   0.592   0.5542
## race.ethnicity.5levelOther   -0.83182    0.88259  -0.942   0.3460
## race.ethnicity.5levelWhite   -0.01519    0.73341  -0.021   0.9835
## demo_race_hispanic1           0.56831    0.32398   1.754   0.0795 .
## interview_age                 0.01157    0.01408   0.822   0.4112
## PDS_score:bisbas_ss_basm_rr -0.06676    0.08247  -0.809   0.4183
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.00511
## lmer.REML =  17691  Scale est. = 15.855    n = 2830
```

4.12 Model: CBCL internalizing factor ~ PDS x MID reaction time (large reward vs. neutral)

Females

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_internal_r ~ PDS_score * rt_diff_large_neutral_z +
##     race.ethnicity.5level + demo_race_hispanic + interview_age
##
## Parametric coefficients:
##                                  Estimate Std. Error t value Pr(>|t|)
## (Intercept)                       0.95157    1.97175   0.483    0.629
## PDS_score                         0.99869    0.17495   5.709  1.3e-08 ***
## rt_diff_large_neutral_z           0.12193    0.31251   0.390    0.696
## race.ethnicity.5levelBlack       -0.42743    0.76669  -0.557    0.577
## race.ethnicity.5levelMixed        0.79385    0.76032   1.044    0.297
## race.ethnicity.5levelOther        0.29260    0.87738   0.333    0.739
```

```
## race.ethnicity.5levelWhite         0.94302    0.70264   1.342    0.180
## demo_race_hispanic1                0.25469    0.34704   0.734    0.463
## interview_age                      0.01350    0.01609   0.839    0.402
## PDS_score:rt_diff_large_neutral_z -0.02866    0.17136  -0.167    0.867
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.0171
## lmer.REML =  13448  Scale est. = 17.055    n = 2179
```

Males

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_internal_r ~ PDS_score * rt_diff_large_neutral_z +
##     race.ethnicity.5level + demo_race_hispanic + interview_age
##
## Parametric coefficients:
##                                  Estimate Std. Error t value Pr(>|t|)
## (Intercept)                       2.83647    2.05292   1.382 0.167209
## PDS_score                         0.86126    0.22493   3.829 0.000132 ***
## rt_diff_large_neutral_z           0.76378    0.32201   2.372 0.017780 *
## race.ethnicity.5levelBlack       -1.12357    0.94030  -1.195 0.232250
## race.ethnicity.5levelMixed       -0.12755    0.93527  -0.136 0.891532
## race.ethnicity.5levelOther       -1.39170    1.03455  -1.345 0.178690
## race.ethnicity.5levelWhite       -0.40754    0.87819  -0.464 0.642644
## demo_race_hispanic1               0.70001    0.35802   1.955 0.050681 .
## interview_age                     0.01138    0.01541   0.738 0.460374
## PDS_score:rt_diff_large_neutral_z -0.62851    0.22296  -2.819 0.004861 **
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.00595
## lmer.REML =  14098  Scale est. = 12.135    n = 2262
```

4.13 Model: CBCL internalizing factor ~ PDS x MID reaction time (large vs. small reward)

Females

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_internal_r ~ PDS_score * rt_diff_large_small_z +
##     race.ethnicity.5level + demo_race_hispanic + interview_age
##
## Parametric coefficients:
##                                  Estimate Std. Error t value Pr(>|t|)
```

```
## (Intercept)                       0.948396   1.969550   0.482    0.630
## PDS_score                         0.998096   0.174900   5.707 1.31e-08 ***
## rt_diff_large_small_z             0.131991   0.291413   0.453    0.651
## race.ethnicity.5levelBlack       -0.398080   0.766670  -0.519    0.604
## race.ethnicity.5levelMixed        0.822991   0.760405   1.082    0.279
## race.ethnicity.5levelOther        0.318006   0.877059   0.363    0.717
## race.ethnicity.5levelWhite        0.967847   0.702348   1.378    0.168
## demo_race_hispanic1               0.251364   0.346794   0.725    0.469
## interview_age                     0.013342   0.016080   0.830    0.407
## PDS_score:rt_diff_large_small_z   0.004203   0.159261   0.026    0.979
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.0176
## lmer.REML =  13448  Scale est. = 17.019    n = 2179
```

Males

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_internal_r ~ PDS_score * rt_diff_large_small_z +
##     race.ethnicity.5level + demo_race_hispanic + interview_age
##
## Parametric coefficients:
##                                  Estimate Std. Error t value Pr(>|t|)
## (Intercept)                      3.046734   2.052414   1.484 0.137826
## PDS_score                        0.863210   0.225290   3.832 0.000131 ***
## rt_diff_large_small_z            0.323943   0.327589   0.989 0.322832
## race.ethnicity.5levelBlack      -1.088601   0.941799  -1.156 0.247855
## race.ethnicity.5levelMixed      -0.155016   0.935945  -0.166 0.868467
## race.ethnicity.5levelOther      -1.386062   1.035551  -1.338 0.180876
## race.ethnicity.5levelWhite      -0.448114   0.878909  -0.510 0.610205
## demo_race_hispanic1              0.723235   0.358872   2.015 0.043992 *
## interview_age                    0.009806   0.015408   0.636 0.524558
## PDS_score:rt_diff_large_small_z -0.361426   0.229120  -1.577 0.114832
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.00522
## lmer.REML =  14102  Scale est. = 12.133    n = 2262
```

4.14 Model: CBCL internalizing factor ~ Testosterone x Accumbens activity (anticipation stage) + PDS

Females

```
##
## Family: gaussian
## Link function: identity
##
```

```
## Formula:
## cbcl_scr_syn_internal_r ~ PDS_score + hormone_scr_ert_mean *
##     accumbens_rvsn_ant_z + race.ethnicity.5level + demo_race_hispanic +
##     interview_age
##
## Parametric coefficients:
##                                           Estimate Std. Error t value Pr(>|t|)
## (Intercept)                               -0.181291   2.081064  -0.087  0.93059
## PDS_score                                  1.028257   0.190070   5.410 7.13e-08
## hormone_scr_ert_mean                      -0.002649   0.007808  -0.339  0.73446
## accumbens_rvsn_ant_z                       0.748352   0.395459   1.892  0.05860
## race.ethnicity.5levelBlack                -0.489731   0.799326  -0.613  0.54016
## race.ethnicity.5levelMixed                 0.901860   0.791070   1.140  0.25441
## race.ethnicity.5levelOther                 0.025106   0.942731   0.027  0.97876
## race.ethnicity.5levelWhite                 1.193196   0.725804   1.644  0.10035
## demo_race_hispanic1                        0.059304   0.364861   0.163  0.87090
## interview_age                              0.021642   0.017153   1.262  0.20721
## hormone_scr_ert_mean:accumbens_rvsn_ant_z -0.025498   0.009632  -2.647  0.00818
##
## (Intercept)
## PDS_score                                 ***
## hormone_scr_ert_mean
## accumbens_rvsn_ant_z                      .
## race.ethnicity.5levelBlack
## race.ethnicity.5levelMixed
## race.ethnicity.5levelOther
## race.ethnicity.5levelWhite
## demo_race_hispanic1
## interview_age
## hormone_scr_ert_mean:accumbens_rvsn_ant_z **
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.0241
## lmer.REML =  11374  Scale est. = 15.52     n = 1850
```

Males

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_internal_r ~ PDS_score + hormone_scr_ert_mean *
##     accumbens_rvsn_ant_z + race.ethnicity.5level + demo_race_hispanic +
##     interview_age
##
## Parametric coefficients:
##                                           Estimate Std. Error t value Pr(>|t|)
## (Intercept)                               2.731558   2.218974   1.231 0.218479
## PDS_score                                 0.941556   0.257207   3.661 0.000259
## hormone_scr_ert_mean                      0.011798   0.009054   1.303 0.192752
## accumbens_rvsn_ant_z                      0.090278   0.411942   0.219 0.826555
```

```
## race.ethnicity.5levelBlack                -0.501684   1.041845  -0.482 0.630194
## race.ethnicity.5levelMixed                 0.431402   1.029140   0.419 0.675128
## race.ethnicity.5levelOther                -0.752323   1.145798  -0.657 0.511524
## race.ethnicity.5levelWhite                 0.279589   0.967968   0.289 0.772735
## demo_race_hispanic1                        0.745713   0.391612   1.904 0.057037
## interview_age                              0.003260   0.016842   0.194 0.846545
## hormone_scr_ert_mean:accumbens_rvsn_ant_z -0.006021   0.012170  -0.495 0.620844
##
## (Intercept)
## PDS_score                                 ***
## hormone_scr_ert_mean
## accumbens_rvsn_ant_z
## race.ethnicity.5levelBlack
## race.ethnicity.5levelMixed
## race.ethnicity.5levelOther
## race.ethnicity.5levelWhite
## demo_race_hispanic1                       .
## interview_age
## hormone_scr_ert_mean:accumbens_rvsn_ant_z
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.0058
## lmer.REML =  11641  Scale est. = 12.616    n = 1867
```

4.15 Model: CBCL internalizing factor ~ Testosterone x Caudate activity (anticipation stage) + PDS

Females

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_internal_r ~ PDS_score + hormone_scr_ert_mean *
##     caudate_rvsn_ant_z + race.ethnicity.5level + demo_race_hispanic +
##     interview_age
##
## Parametric coefficients:
##                                          Estimate Std. Error t value Pr(>|t|)
## (Intercept)                              0.165775   2.091116   0.079   0.9368
## PDS_score                                0.995050   0.190494   5.224 1.95e-07
## hormone_scr_ert_mean                    -0.002227   0.007845  -0.284   0.7765
## caudate_rvsn_ant_z                       0.378963   0.306118   1.238   0.2159
## race.ethnicity.5levelBlack              -0.474215   0.802532  -0.591   0.5547
## race.ethnicity.5levelMixed               0.913794   0.793343   1.152   0.2495
## race.ethnicity.5levelOther               0.066373   0.947244   0.070   0.9441
## race.ethnicity.5levelWhite               1.221957   0.728462   1.677   0.0936
## demo_race_hispanic1                      0.023850   0.365429   0.065   0.9480
## interview_age                            0.019016   0.017253   1.102   0.2705
## hormone_scr_ert_mean:caudate_rvsn_ant_z -0.009497   0.007717  -1.231   0.2186
##
```

```
## (Intercept)
## PDS_score                                ***
## hormone_scr_ert_mean
## caudate_rvsn_ant_z
## race.ethnicity.5levelBlack
## race.ethnicity.5levelMixed
## race.ethnicity.5levelOther
## race.ethnicity.5levelWhite               .
## demo_race_hispanic1
## interview_age
## hormone_scr_ert_mean:caudate_rvsn_ant_z
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.0196
## lmer.REML =  11425  Scale est. = 16.042    n = 1855
```

Males

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_internal_r ~ PDS_score + hormone_scr_ert_mean *
##     caudate_rvsn_ant_z + race.ethnicity.5level + demo_race_hispanic +
##     interview_age
##
## Parametric coefficients:
##                                          Estimate Std. Error t value Pr(>|t|)
## (Intercept)                              2.683096   2.223564   1.207 0.227715
## PDS_score                                0.958701   0.259708   3.691 0.000229
## hormone_scr_ert_mean                     0.011834   0.009062   1.306 0.191751
## caudate_rvsn_ant_z                       0.379173   0.318703   1.190 0.234302
## race.ethnicity.5levelBlack              -0.435280   1.042708  -0.417 0.676396
## race.ethnicity.5levelMixed               0.504033   1.029705   0.489 0.624551
## race.ethnicity.5levelOther              -0.807830   1.145976  -0.705 0.480944
## race.ethnicity.5levelWhite               0.342370   0.969902   0.353 0.724133
## demo_race_hispanic1                      0.814593   0.394821   2.063 0.039233
## interview_age                            0.003252   0.016889   0.193 0.847332
## hormone_scr_ert_mean:caudate_rvsn_ant_z -0.008757   0.009119  -0.960 0.337000
##
## (Intercept)
## PDS_score                                ***
## hormone_scr_ert_mean
## caudate_rvsn_ant_z
## race.ethnicity.5levelBlack
## race.ethnicity.5levelMixed
## race.ethnicity.5levelOther
## race.ethnicity.5levelWhite
## demo_race_hispanic1                      *
## interview_age
## hormone_scr_ert_mean:caudate_rvsn_ant_z
```

```
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.00634
## lmer.REML =  11682  Scale est. = 12.616    n = 1872
```

4.16 Model: CBCL internalizing factor ~ Testosterone x Putamen activity (anticipation stage) + PDS

Females

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_internal_r ~ PDS_score + hormone_scr_ert_mean *
##     putamen_rvsn_ant_z + race.ethnicity.5level + demo_race_hispanic +
##     interview_age
##
## Parametric coefficients:
##                                      Estimate Std. Error t value Pr(>|t|)
## (Intercept)                          0.138727   2.090567   0.066   0.9471
## PDS_score                            1.010336   0.190694   5.298 1.31e-07
## hormone_scr_ert_mean                -0.002053   0.007858  -0.261   0.7939
## putamen_rvsn_ant_z                   0.229449   0.311016   0.738   0.4608
## race.ethnicity.5levelBlack          -0.520634   0.802461  -0.649   0.5166
## race.ethnicity.5levelMixed           0.899355   0.793768   1.133   0.2574
## race.ethnicity.5levelOther           0.009675   0.945429   0.010   0.9918
## race.ethnicity.5levelWhite           1.227171   0.728365   1.685   0.0922
## demo_race_hispanic1                  0.017266   0.365130   0.047   0.9623
## interview_age                        0.019075   0.017255   1.105   0.2691
## hormone_scr_ert_mean:putamen_rvsn_ant_z -0.006497   0.007955  -0.817   0.4142
##
## (Intercept)
## PDS_score                           ***
## hormone_scr_ert_mean
## putamen_rvsn_ant_z
## race.ethnicity.5levelBlack
## race.ethnicity.5levelMixed
## race.ethnicity.5levelOther
## race.ethnicity.5levelWhite          .
## demo_race_hispanic1
## interview_age
## hormone_scr_ert_mean:putamen_rvsn_ant_z
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.0202
## lmer.REML =  11414  Scale est. = 16.009    n = 1853
```

Males

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_internal_r ~ PDS_score + hormone_scr_ert_mean *
##     putamen_rvsn_ant_z + race.ethnicity.5level + demo_race_hispanic +
##     interview_age
##
## Parametric coefficients:
##                                        Estimate Std. Error t value Pr(>|t|)
## (Intercept)                            2.822472   2.224804   1.269 0.204729
## PDS_score                              0.970709   0.260034   3.733 0.000195
## hormone_scr_ert_mean                   0.010804   0.009047   1.194 0.232522
## putamen_rvsn_ant_z                     0.035317   0.332133   0.106 0.915330
## race.ethnicity.5levelBlack            -0.518482   1.042955  -0.497 0.619158
## race.ethnicity.5levelMixed             0.479308   1.030214   0.465 0.641806
## race.ethnicity.5levelOther            -0.786175   1.147678  -0.685 0.493421
## race.ethnicity.5levelWhite             0.318837   0.970303   0.329 0.742498
## demo_race_hispanic1                    0.766117   0.391575   1.957 0.050555
## interview_age                          0.002391   0.016902   0.141 0.887499
## hormone_scr_ert_mean:putamen_rvsn_ant_z -0.004326   0.009672  -0.447 0.654679
##
## (Intercept)
## PDS_score                             ***
## hormone_scr_ert_mean
## putamen_rvsn_ant_z
## race.ethnicity.5levelBlack
## race.ethnicity.5levelMixed
## race.ethnicity.5levelOther
## race.ethnicity.5levelWhite
## demo_race_hispanic1                    .
## interview_age
## hormone_scr_ert_mean:putamen_rvsn_ant_z
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.00626
## lmer.REML =  11681  Scale est. = 12.707    n = 1872
```

4.17 Model: CBCL internalizing factor ~ Testosterone x Accumbens activity (feedback stage) + PDS

Females

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_internal_r ~ PDS_score + hormone_scr_ert_mean *
##     accumbens_posvsneg_feedback_z + race.ethnicity.5level + demo_race_hispanic +
```

```
##     interview_age
##
## Parametric coefficients:
##                                                  Estimate Std. Error t value
## (Intercept)                                     -0.190478   2.096649  -0.091
## PDS_score                                        0.960917   0.191780   5.011
## hormone_scr_ert_mean                            -0.001236   0.007857  -0.157
## accumbens_posvsneg_feedback_z                    0.168432   0.424783   0.397
## race.ethnicity.5levelBlack                      -0.222052   0.810009  -0.274
## race.ethnicity.5levelMixed                       1.183490   0.799554   1.480
## race.ethnicity.5levelOther                       0.317332   0.947940   0.335
## race.ethnicity.5levelWhite                       1.453078   0.734562   1.978
## demo_race_hispanic1                              0.014620   0.368046   0.040
## interview_age                                    0.020263   0.017274   1.173
## hormone_scr_ert_mean:accumbens_posvsneg_feedback_z  0.001104   0.010674   0.103
##                                                 Pr(>|t|)
## (Intercept)                                       0.9276
## PDS_score                                       5.95e-07 ***
## hormone_scr_ert_mean                              0.8750
## accumbens_posvsneg_feedback_z                     0.6918
## race.ethnicity.5levelBlack                        0.7840
## race.ethnicity.5levelMixed                        0.1390
## race.ethnicity.5levelOther                        0.7378
## race.ethnicity.5levelWhite                        0.0481 *
## demo_race_hispanic1                               0.9683
## interview_age                                     0.2409
## hormone_scr_ert_mean:accumbens_posvsneg_feedback_z   0.9177
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.0194
## lmer.REML =  11378  Scale est. = 16.001    n = 1848
```

Males

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_internal_r ~ PDS_score + hormone_scr_ert_mean *
##     accumbens_posvsneg_feedback_z + race.ethnicity.5level + demo_race_hispanic +
##     interview_age
##
## Parametric coefficients:
##                                                Estimate Std. Error
## (Intercept)                                   3.2093646  2.2321742
## PDS_score                                     0.9702666  0.2581040
## hormone_scr_ert_mean                          0.0097531  0.0090674
## accumbens_posvsneg_feedback_z                -0.3649853  0.4096384
## race.ethnicity.5levelBlack                   -0.5738801  1.0575576
## race.ethnicity.5levelMixed                    0.4784749  1.0451087
## race.ethnicity.5levelOther                   -0.9241075  1.1587736
```

```
## race.ethnicity.5levelWhite                             0.2600827  0.9856752
## demo_race_hispanic1                                    0.7865190  0.3919504
## interview_age                                          0.0000917  0.0169152
## hormone_scr_ert_mean:accumbens_posvsneg_feedback_z     0.0056884  0.0120614
##                                                       t value Pr(>|t|)
## (Intercept)                                             1.438 0.150666
## PDS_score                                               3.759 0.000176 ***
## hormone_scr_ert_mean                                    1.076 0.282233
## accumbens_posvsneg_feedback_z                          -0.891 0.373048
## race.ethnicity.5levelBlack                             -0.543 0.587438
## race.ethnicity.5levelMixed                              0.458 0.647133
## race.ethnicity.5levelOther                             -0.797 0.425270
## race.ethnicity.5levelWhite                              0.264 0.791915
## demo_race_hispanic1                                     2.007 0.044928 *
## interview_age                                           0.005 0.995675
## hormone_scr_ert_mean:accumbens_posvsneg_feedback_z      0.472 0.637251
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.00633
## lmer.REML =  11692  Scale est. = 12.536    n = 1873
```

4.18 Model: CBCL internalizing factor ~ Testosterone x Caudate activity (Feedback stage) + PDS

Females

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_internal_r ~ PDS_score + hormone_scr_ert_mean *
##     caudate_posvsneg_feedback_z + race.ethnicity.5level + demo_race_hispanic +
##     interview_age
##
## Parametric coefficients:
##                                                    Estimate Std. Error t value
## (Intercept)                                      -0.2182413  2.0973786  -0.104
## PDS_score                                         0.9674477  0.1909243   5.067
## hormone_scr_ert_mean                             -0.0004754  0.0078346  -0.061
## caudate_posvsneg_feedback_z                      -0.1399113  0.3318573  -0.422
## race.ethnicity.5levelBlack                       -0.2926293  0.8113753  -0.361
## race.ethnicity.5levelMixed                        1.1277284  0.8007884   1.408
## race.ethnicity.5levelOther                        0.2609206  0.9475744   0.275
## race.ethnicity.5levelWhite                        1.4575625  0.7357842   1.981
## demo_race_hispanic1                               0.0668360  0.3667756   0.182
## interview_age                                     0.0202858  0.0172731   1.174
## hormone_scr_ert_mean:caudate_posvsneg_feedback_z  0.0013410  0.0084975   0.158
##                                                  Pr(>|t|)
## (Intercept)                                        0.9171
## PDS_score                                        4.44e-07 ***
## hormone_scr_ert_mean                               0.9516
```

```
## caudate_posvsneg_feedback_z                          0.6734
## race.ethnicity.5levelBlack                           0.7184
## race.ethnicity.5levelMixed                           0.1592
## race.ethnicity.5levelOther                           0.7831
## race.ethnicity.5levelWhite                           0.0477 *
## demo_race_hispanic1                                  0.8554
## interview_age                                        0.2404
## hormone_scr_ert_mean:caudate_posvsneg_feedback_z     0.8746
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.0196
## lmer.REML =  11385  Scale est. = 16.086    n = 1849
```

Males

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_internal_r ~ PDS_score + hormone_scr_ert_mean *
##     caudate_posvsneg_feedback_z + race.ethnicity.5level + demo_race_hispanic +
##     interview_age
##
## Parametric coefficients:
##                                                  Estimate Std. Error t value
## (Intercept)                                     3.2734218  2.2345926   1.465
## PDS_score                                       0.9313613  0.2593189   3.592
## hormone_scr_ert_mean                            0.0096474  0.0091153   1.058
## caudate_posvsneg_feedback_z                    -0.1904534  0.3266384  -0.583
## race.ethnicity.5levelBlack                     -0.5006432  1.0460636  -0.479
## race.ethnicity.5levelMixed                      0.5112134  1.0319437   0.495
## race.ethnicity.5levelOther                     -0.8595012  1.1485001  -0.748
## race.ethnicity.5levelWhite                      0.2885792  0.9725685   0.297
## demo_race_hispanic1                             0.7714012  0.3912138   1.972
## interview_age                                  -0.0004641  0.0169756  -0.027
## hormone_scr_ert_mean:caudate_posvsneg_feedback_z 0.0045107  0.0094310   0.478
##                                                 Pr(>|t|)
## (Intercept)                                     0.143122
## PDS_score                                       0.000337 ***
## hormone_scr_ert_mean                            0.290024
## caudate_posvsneg_feedback_z                     0.559916
## race.ethnicity.5levelBlack                      0.632282
## race.ethnicity.5levelMixed                      0.620384
## race.ethnicity.5levelOther                      0.454333
## race.ethnicity.5levelWhite                      0.766715
## demo_race_hispanic1                             0.048779 *
## interview_age                                   0.978191
## hormone_scr_ert_mean:caudate_posvsneg_feedback_z 0.632502
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
```

```
##
## R-sq.(adj) =  0.00561
## lmer.REML =  11649  Scale est. = 13.19     n = 1864
```

4.19 Model: CBCL internalizing factor ~ Testosterone x Putamen activity (Feedback stage) + PDS

Females

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_internal_r ~ PDS_score + hormone_scr_ert_mean *
##     putamen_posvsneg_feedback_z + race.ethnicity.5level + demo_race_hispanic +
##     interview_age
##
## Parametric coefficients:
##                                                 Estimate Std. Error t value
## (Intercept)                                     0.118158   2.089886   0.057
## PDS_score                                       1.024707   0.191144   5.361
## hormone_scr_ert_mean                           -0.002045   0.007853  -0.260
## putamen_posvsneg_feedback_z                     0.083296   0.337089   0.247
## race.ethnicity.5levelBlack                     -0.486371   0.803308  -0.605
## race.ethnicity.5levelMixed                      0.913244   0.793817   1.150
## race.ethnicity.5levelOther                     -0.045591   0.944110  -0.048
## race.ethnicity.5levelWhite                      1.224540   0.728436   1.681
## demo_race_hispanic1                             0.100062   0.366661   0.273
## interview_age                                   0.018886   0.017236   1.096
## hormone_scr_ert_mean:putamen_posvsneg_feedback_z -0.005448   0.008453  -0.645
##                                                Pr(>|t|)
## (Intercept)                                      0.9549
## PDS_score                                      9.32e-08 ***
## hormone_scr_ert_mean                             0.7946
## putamen_posvsneg_feedback_z                      0.8049
## race.ethnicity.5levelBlack                       0.5449
## race.ethnicity.5levelMixed                       0.2501
## race.ethnicity.5levelOther                       0.9615
## race.ethnicity.5levelWhite                       0.0929 .
## demo_race_hispanic1                              0.7850
## interview_age                                    0.2734
## hormone_scr_ert_mean:putamen_posvsneg_feedback_z   0.5193
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.0207
## lmer.REML =  11406  Scale est. = 16.487    n = 1852
```

Males

```
##
## Family: gaussian
## Link function: identity
```

```
##
## Formula:
## cbcl_scr_syn_internal_r ~ PDS_score + hormone_scr_ert_mean *
##     putamen_posvsneg_feedback_z + race.ethnicity.5level + demo_race_hispanic +
##     interview_age
##
## Parametric coefficients:
##                                                Estimate Std. Error t value
## (Intercept)                                   3.222e+00  2.233e+00   1.443
## PDS_score                                     9.077e-01  2.588e-01   3.507
## hormone_scr_ert_mean                          9.898e-03  9.102e-03   1.087
## putamen_posvsneg_feedback_z                   6.944e-02  3.307e-01   0.210
## race.ethnicity.5levelBlack                   -4.320e-01  1.047e+00  -0.413
## race.ethnicity.5levelMixed                    5.610e-01  1.033e+00   0.543
## race.ethnicity.5levelOther                   -8.051e-01  1.149e+00  -0.700
## race.ethnicity.5levelWhite                    3.285e-01  9.728e-01   0.338
## demo_race_hispanic1                           7.186e-01  3.918e-01   1.834
## interview_age                                -9.080e-05  1.697e-02  -0.005
## hormone_scr_ert_mean:putamen_posvsneg_feedback_z -7.763e-05  9.786e-03  -0.008
##                                                Pr(>|t|)
## (Intercept)                                    0.149262
## PDS_score                                      0.000463 ***
## hormone_scr_ert_mean                           0.276976
## putamen_posvsneg_feedback_z                    0.833722
## race.ethnicity.5levelBlack                     0.679916
## race.ethnicity.5levelMixed                     0.587093
## race.ethnicity.5levelOther                     0.483756
## race.ethnicity.5levelWhite                     0.735609
## demo_race_hispanic1                            0.066837 .
## interview_age                                  0.995732
## hormone_scr_ert_mean:putamen_posvsneg_feedback_z 0.993671
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.00537
## lmer.REML =  11684  Scale est. = 13.524    n = 1869
```

4.20 Model: CBCL internalizing factor ~ Testosterone x Lateral OFC activity (anticipation stage) + PDS

Females

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_internal_r ~ PDS_score + hormone_scr_ert_mean *
##     lOFC_rvsn_ant_z + race.ethnicity.5level + demo_race_hispanic +
##     interview_age
##
## Parametric coefficients:
##                                     Estimate Std. Error t value Pr(>|t|)
```

```
## (Intercept)                           -0.268446   2.100526  -0.128   0.8983
## PDS_score                              0.953244   0.192624   4.949 8.15e-07 ***
## hormone_scr_ert_mean                  -0.001902   0.007873  -0.242   0.8091
## lOFC_rvsn_ant_z                        0.501329   0.495476   1.012   0.3118
## race.ethnicity.5levelBlack            -0.166435   0.811719  -0.205   0.8376
## race.ethnicity.5levelMixed             1.195701   0.801185   1.492   0.1358
## race.ethnicity.5levelOther             0.403243   0.951844   0.424   0.6719
## race.ethnicity.5levelWhite             1.486237   0.735959   2.019   0.0436 *
## demo_race_hispanic1                    0.002524   0.367034   0.007   0.9945
## interview_age                          0.021066   0.017312   1.217   0.2238
## hormone_scr_ert_mean:lOFC_rvsn_ant_z -0.009990   0.012957  -0.771   0.4408
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.0189
## lmer.REML =  11345  Scale est. = 15.991    n = 1842
```

Males

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_internal_r ~ PDS_score + hormone_scr_ert_mean *
##     lOFC_rvsn_ant_z + race.ethnicity.5level + demo_race_hispanic +
##     interview_age
##
## Parametric coefficients:
##                                       Estimate Std. Error t value Pr(>|t|)
## (Intercept)                           2.661574   2.215272   1.201  0.22972
## PDS_score                             0.842574   0.259871   3.242  0.00121 **
## hormone_scr_ert_mean                  0.010894   0.009006   1.210  0.22658
## lOFC_rvsn_ant_z                       0.313675   0.467634   0.671  0.50245
## race.ethnicity.5levelBlack           -0.609689   1.048009  -0.582  0.56080
## race.ethnicity.5levelMixed            0.455567   1.034061   0.441  0.65958
## race.ethnicity.5levelOther           -0.861293   1.144960  -0.752  0.45200
## race.ethnicity.5levelWhite            0.241569   0.974216   0.248  0.80419
## demo_race_hispanic1                   0.755810   0.391691   1.930  0.05381 .
## interview_age                         0.005425   0.016777   0.323  0.74645
## hormone_scr_ert_mean:lOFC_rvsn_ant_z -0.014912   0.012811  -1.164  0.24459
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.00604
## lmer.REML =  11561  Scale est. = 12.61     n = 1859
```

4.21 Model: CBCL internalizing factor ~ Testosterone x Medial OFC activity (anticipation stage) + PDS

Females

```
##
```

```
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_internal_r ~ PDS_score + hormone_scr_ert_mean *
##     mOFC_rvsn_ant_z + race.ethnicity.5level + demo_race_hispanic +
##     interview_age
##
## Parametric coefficients:
##                                     Estimate Std. Error t value Pr(>|t|)
## (Intercept)                        -0.335356   2.103623  -0.159    0.873
## PDS_score                           0.953065   0.192757   4.944 8.34e-07 ***
## hormone_scr_ert_mean               -0.001117   0.007860  -0.142    0.887
## mOFC_rvsn_ant_z                     0.415906   0.424412   0.980    0.327
## race.ethnicity.5levelBlack         -0.176200   0.811137  -0.217    0.828
## race.ethnicity.5levelMixed          1.170896   0.801983   1.460    0.144
## race.ethnicity.5levelOther          0.367373   0.949882   0.387    0.699
## race.ethnicity.5levelWhite          1.498526   0.736273   2.035    0.042 *
## demo_race_hispanic1                -0.004546   0.367034  -0.012    0.990
## interview_age                       0.021341   0.017329   1.232    0.218
## hormone_scr_ert_mean:mOFC_rvsn_ant_z -0.006879   0.010767  -0.639    0.523
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.019
## lmer.REML =  11351  Scale est. = 15.87     n = 1843
```

Males

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_internal_r ~ PDS_score + hormone_scr_ert_mean *
##     mOFC_rvsn_ant_z + race.ethnicity.5level + demo_race_hispanic +
##     interview_age
##
## Parametric coefficients:
##                                     Estimate Std. Error t value Pr(>|t|)
## (Intercept)                         2.496560   2.227316   1.121 0.262483
## PDS_score                           0.918440   0.260289   3.529 0.000428 ***
## hormone_scr_ert_mean                0.010672   0.009070   1.177 0.239497
## mOFC_rvsn_ant_z                    -0.091310   0.403846  -0.226 0.821148
## race.ethnicity.5levelBlack         -0.420739   1.053129  -0.400 0.689561
## race.ethnicity.5levelMixed          0.490566   1.039464   0.472 0.637024
## race.ethnicity.5levelOther         -0.790655   1.152608  -0.686 0.492817
## race.ethnicity.5levelWhite          0.278907   0.980399   0.284 0.776072
## demo_race_hispanic1                 0.712338   0.392943   1.813 0.070020 .
## interview_age                       0.005702   0.016873   0.338 0.735450
## hormone_scr_ert_mean:mOFC_rvsn_ant_z -0.002681   0.011440  -0.234 0.814748
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

```
##
##
## R-sq.(adj) =  0.00519
## lmer.REML =  11615  Scale est. = 12.518    n = 1864
```

4.22 Model: CBCL internalizing factor ~ Testosterone x Lateral OFC activity (feedback stage) + PDS

Females

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_internal_r ~ PDS_score + hormone_scr_ert_mean *
##     lOFC_posvsneg_feedback_z + race.ethnicity.5level + demo_race_hispanic +
##     interview_age
##
## Parametric coefficients:
##                                             Estimate Std. Error t value
## (Intercept)                                -0.044937   2.092752  -0.021
## PDS_score                                   0.925586   0.192200   4.816
## hormone_scr_ert_mean                       -0.001409   0.007855  -0.179
## lOFC_posvsneg_feedback_z                    0.007051   0.551494   0.013
## race.ethnicity.5levelBlack                 -0.395454   0.802080  -0.493
## race.ethnicity.5levelMixed                  0.886869   0.792606   1.119
## race.ethnicity.5levelOther                 -0.015041   0.943164  -0.016
## race.ethnicity.5levelWhite                  1.204774   0.726589   1.658
## demo_race_hispanic1                         0.062441   0.366832   0.170
## interview_age                               0.021466   0.017291   1.241
## hormone_scr_ert_mean:lOFC_posvsneg_feedback_z -0.002902   0.014645  -0.198
##                                            Pr(>|t|)
## (Intercept)                                  0.9829
## PDS_score                                  1.59e-06 ***
## hormone_scr_ert_mean                         0.8576
## lOFC_posvsneg_feedback_z                     0.9898
## race.ethnicity.5levelBlack                   0.6220
## race.ethnicity.5levelMixed                   0.2633
## race.ethnicity.5levelOther                   0.9873
## race.ethnicity.5levelWhite                   0.0975 .
## demo_race_hispanic1                          0.8649
## interview_age                                0.2146
## hormone_scr_ert_mean:lOFC_posvsneg_feedback_z   0.8430
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.0166
## lmer.REML =  11373  Scale est. = 16.334    n = 1848
```

Males

```
##
## Family: gaussian
```

```
## Link function: identity
##
## Formula:
## cbcl_scr_syn_internal_r ~ PDS_score + hormone_scr_ert_mean *
##     lOFC_posvsneg_feedback_z + race.ethnicity.5level + demo_race_hispanic +
##     interview_age
##
## Parametric coefficients:
##                                             Estimate Std. Error t value
## (Intercept)                                 3.132598   2.228475   1.406
## PDS_score                                   0.902886   0.260047   3.472
## hormone_scr_ert_mean                        0.010987   0.009038   1.216
## lOFC_posvsneg_feedback_z                    0.075070   0.526484   0.143
## race.ethnicity.5levelBlack                 -0.575538   1.057172  -0.544
## race.ethnicity.5levelMixed                  0.469622   1.042176   0.451
## race.ethnicity.5levelOther                 -0.895749   1.154674  -0.776
## race.ethnicity.5levelWhite                  0.271549   0.981503   0.277
## demo_race_hispanic1                         0.763738   0.393804   1.939
## interview_age                               0.001034   0.016891   0.061
## hormone_scr_ert_mean:lOFC_posvsneg_feedback_z  0.005022   0.014863   0.338
##                                            Pr(>|t|)
## (Intercept)                                0.159977
## PDS_score                                  0.000528 ***
## hormone_scr_ert_mean                       0.224303
## lOFC_posvsneg_feedback_z                   0.886631
## race.ethnicity.5levelBlack                 0.586223
## race.ethnicity.5levelMixed                 0.652318
## race.ethnicity.5levelOther                 0.437990
## race.ethnicity.5levelWhite                 0.782067
## demo_race_hispanic1                        0.052606 .
## interview_age                              0.951180
## hormone_scr_ert_mean:lOFC_posvsneg_feedback_z 0.735490
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.00464
## lmer.REML =  11580  Scale est. = 12.527    n = 1858
```

4.23 Model: CBCL internalizing factor ~ Testosterone x Medial OFC activity (feedback stage) + PDS

Females

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_internal_r ~ PDS_score + hormone_scr_ert_mean *
##     mOFC_posvsneg_feedback_z + race.ethnicity.5level + demo_race_hispanic +
##     interview_age
##
## Parametric coefficients:
```

```
##                                              Estimate Std. Error t value
## (Intercept)                                 -0.314760   2.093249  -0.150
## PDS_score                                    0.954451   0.191597   4.982
## hormone_scr_ert_mean                        -0.001444   0.007850  -0.184
## mOFC_posvsneg_feedback_z                     0.425476   0.479556   0.887
## race.ethnicity.5levelBlack                  -0.145210   0.809952  -0.179
## race.ethnicity.5levelMixed                   1.225959   0.799258   1.534
## race.ethnicity.5levelOther                   0.225314   0.948784   0.237
## race.ethnicity.5levelWhite                   1.475471   0.734587   2.009
## demo_race_hispanic1                          0.036169   0.366841   0.099
## interview_age                                0.021263   0.017250   1.233
## hormone_scr_ert_mean:mOFC_posvsneg_feedback_z -0.006730   0.012439  -0.541
##                                             Pr(>|t|)
## (Intercept)                                   0.8805
## PDS_score                                    6.9e-07 ***
## hormone_scr_ert_mean                          0.8540
## mOFC_posvsneg_feedback_z                      0.3751
## race.ethnicity.5levelBlack                    0.8577
## race.ethnicity.5levelMixed                    0.1252
## race.ethnicity.5levelOther                    0.8123
## race.ethnicity.5levelWhite                    0.0447 *
## demo_race_hispanic1                           0.9215
## interview_age                                 0.2179
## hormone_scr_ert_mean:mOFC_posvsneg_feedback_z   0.5886
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.019
## lmer.REML =  11407  Scale est. = 16.118    n = 1853
```

Males

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_internal_r ~ PDS_score + hormone_scr_ert_mean *
##     mOFC_posvsneg_feedback_z + race.ethnicity.5level + demo_race_hispanic +
##     interview_age
##
## Parametric coefficients:
##                                              Estimate Std. Error t value
## (Intercept)                                  2.999888   2.221616   1.350
## PDS_score                                    0.911077   0.259259   3.514
## hormone_scr_ert_mean                         0.012363   0.009020   1.371
## mOFC_posvsneg_feedback_z                    -0.464001   0.437954  -1.059
## race.ethnicity.5levelBlack                  -0.655102   1.053972  -0.622
## race.ethnicity.5levelMixed                   0.480853   1.039058   0.463
## race.ethnicity.5levelOther                  -0.893475   1.151337  -0.776
## race.ethnicity.5levelWhite                   0.254733   0.979137   0.260
## demo_race_hispanic1                          0.766724   0.390613   1.963
## interview_age                                0.001901   0.016837   0.113
```

```
## hormone_scr_ert_mean:mOFC_posvsneg_feedback_z  0.018415   0.012444   1.480
##                                                Pr(>|t|)
## (Intercept)                                    0.177079
## PDS_score                                      0.000452 ***
## hormone_scr_ert_mean                           0.170648
## mOFC_posvsneg_feedback_z                       0.289522
## race.ethnicity.5levelBlack                     0.534311
## race.ethnicity.5levelMixed                     0.643578
## race.ethnicity.5levelOther                     0.437829
## race.ethnicity.5levelWhite                     0.794769
## demo_race_hispanic1                            0.049810 *
## interview_age                                  0.910138
## hormone_scr_ert_mean:mOFC_posvsneg_feedback_z 0.139086
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.00579
## lmer.REML =  11612  Scale est. = 12.558    n = 1864
```

4.24 Model: CBCL internalizing factor ~ Testosterone x BIS-BAS RR + PDS

Females

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_internal_r ~ PDS_score + hormone_scr_ert_mean *
##     bisbas_ss_basm_rr + race.ethnicity.5level + demo_race_hispanic +
##     interview_age
##
## Parametric coefficients:
##                                      Estimate Std. Error t value Pr(>|t|)
## (Intercept)                         -0.530598   2.090056  -0.254    0.800
## PDS_score                            0.864135   0.169223   5.106 3.54e-07
## hormone_scr_ert_mean                 0.026192   0.025996   1.008    0.314
## bisbas_ss_basm_rr                    0.091454   0.107910   0.848    0.397
## race.ethnicity.5levelBlack          -0.424060   0.728587  -0.582    0.561
## race.ethnicity.5levelMixed           1.164004   0.726406   1.602    0.109
## race.ethnicity.5levelOther           0.225036   0.843315   0.267    0.790
## race.ethnicity.5levelWhite           0.991807   0.669711   1.481    0.139
## demo_race_hispanic1                  0.175401   0.330640   0.530    0.596
## interview_age                        0.021104   0.015400   1.370    0.171
## hormone_scr_ert_mean:bisbas_ss_basm_rr -0.003168   0.002824  -1.122    0.262
##
## (Intercept)
## PDS_score                           ***
## hormone_scr_ert_mean
## bisbas_ss_basm_rr
## race.ethnicity.5levelBlack
## race.ethnicity.5levelMixed
## race.ethnicity.5levelOther
## race.ethnicity.5levelWhite
```

```
## demo_race_hispanic1
## interview_age
## hormone_scr_ert_mean:bisbas_ss_basm_rr
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.0149
## lmer.REML =  14837  Scale est. = 17.701    n = 2402
```

Males

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_internal_r ~ PDS_score + hormone_scr_ert_mean *
##     bisbas_ss_basm_rr + race.ethnicity.5level + demo_race_hispanic +
##     interview_age
##
## Parametric coefficients:
##                                      Estimate Std. Error t value Pr(>|t|)
## (Intercept)                          3.348717   2.120258   1.579  0.11437
## PDS_score                            0.768346   0.207688   3.700  0.00022
## hormone_scr_ert_mean                 0.020069   0.028073   0.715  0.47473
## bisbas_ss_basm_rr                   -0.023059   0.107484  -0.215  0.83014
## race.ethnicity.5levelBlack          -0.948772   0.811286  -1.169  0.24232
## race.ethnicity.5levelMixed           0.307208   0.803385   0.382  0.70220
## race.ethnicity.5levelOther          -0.683594   0.902876  -0.757  0.44904
## race.ethnicity.5levelWhite           0.041298   0.751295   0.055  0.95617
## demo_race_hispanic1                  0.404732   0.332297   1.218  0.22334
## interview_age                        0.005281   0.014439   0.366  0.71460
## hormone_scr_ert_mean:bisbas_ss_basm_rr -0.001311   0.003061  -0.428  0.66839
##
## (Intercept)
## PDS_score                           ***
## hormone_scr_ert_mean
## bisbas_ss_basm_rr
## race.ethnicity.5levelBlack
## race.ethnicity.5levelMixed
## race.ethnicity.5levelOther
## race.ethnicity.5levelWhite
## demo_race_hispanic1
## interview_age
## hormone_scr_ert_mean:bisbas_ss_basm_rr
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.00346
## lmer.REML =  16373  Scale est. = 14.305    n = 2627
```

4.25 Model: CBCL internalizing factor ~ Testosterone x MID Reaction Time + PDS (large reward vs. neutral)

Females

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_internal_r ~ PDS_score + hormone_scr_ert_mean *
##     rt_diff_large_neutral_z + race.ethnicity.5level + demo_race_hispanic +
##     interview_age
##
## Parametric coefficients:
##                                            Estimate Std. Error t value
## (Intercept)                                0.039314   2.026226   0.019
## PDS_score                                  1.063347   0.186331   5.707
## hormone_scr_ert_mean                      -0.002558   0.007693  -0.333
## rt_diff_large_neutral_z                   -0.282272   0.292040  -0.967
## race.ethnicity.5levelBlack                -0.664826   0.776886  -0.856
## race.ethnicity.5levelMixed                 0.645403   0.769617   0.839
## race.ethnicity.5levelOther                 0.057359   0.891157   0.064
## race.ethnicity.5levelWhite                 0.922120   0.707218   1.304
## demo_race_hispanic1                        0.202435   0.355969   0.569
## interview_age                              0.021392   0.016782   1.275
## hormone_scr_ert_mean:rt_diff_large_neutral_z  0.012999   0.007525   1.728
##                                           Pr(>|t|)
## (Intercept)                                 0.9845
## PDS_score                                1.32e-08 ***
## hormone_scr_ert_mean                        0.7395
## rt_diff_large_neutral_z                     0.3339
## race.ethnicity.5levelBlack                  0.3922
## race.ethnicity.5levelMixed                  0.4018
## race.ethnicity.5levelOther                  0.9487
## race.ethnicity.5levelWhite                  0.1924
## demo_race_hispanic1                         0.5696
## interview_age                               0.2026
## hormone_scr_ert_mean:rt_diff_large_neutral_z   0.0842 .
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.0215
## lmer.REML =  12403  Scale est. = 16.792    n = 2011
```

Males

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_internal_r ~ PDS_score + hormone_scr_ert_mean *
##     rt_diff_large_neutral_z + race.ethnicity.5level + demo_race_hispanic +
```

```
##     interview_age
##
## Parametric coefficients:
##                                             Estimate Std. Error t value
## (Intercept)                                 3.198511   2.092217   1.529
## PDS_score                                   0.930405   0.236663   3.931
## hormone_scr_ert_mean                        0.014041   0.008397   1.672
## rt_diff_large_neutral_z                    -0.005543   0.296296  -0.019
## race.ethnicity.5levelBlack                 -1.162362   0.979840  -1.186
## race.ethnicity.5levelMixed                 -0.178371   0.972383  -0.183
## race.ethnicity.5levelOther                 -1.268748   1.071979  -1.184
## race.ethnicity.5levelWhite                 -0.379270   0.915079  -0.414
## demo_race_hispanic1                         0.538766   0.367909   1.464
## interview_age                               0.004539   0.015822   0.287
## hormone_scr_ert_mean:rt_diff_large_neutral_z -0.001282   0.008319  -0.154
##                                            Pr(>|t|)
## (Intercept)                                  0.1265
## PDS_score                                  8.72e-05 ***
## hormone_scr_ert_mean                         0.0947 .
## rt_diff_large_neutral_z                      0.9851
## race.ethnicity.5levelBlack                   0.2356
## race.ethnicity.5levelMixed                   0.8545
## race.ethnicity.5levelOther                   0.2367
## race.ethnicity.5levelWhite                   0.6786
## demo_race_hispanic1                          0.1432
## interview_age                                0.7742
## hormone_scr_ert_mean:rt_diff_large_neutral_z   0.8775
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.00301
## lmer.REML =  13114  Scale est. = 11.135    n = 2108
```

4.26 Model: CBCL internalizing factor ~ Testosterone x MID Reaction Time + PDS (large vs. small reward)

Females

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_internal_r ~ PDS_score + hormone_scr_ert_mean *
##     rt_diff_large_small_z + race.ethnicity.5level + demo_race_hispanic +
##     interview_age
##
## Parametric coefficients:
##                                      Estimate Std. Error t value
## (Intercept)                         -0.070043   2.023009  -0.035
## PDS_score                            1.065072   0.186270   5.718
## hormone_scr_ert_mean                -0.001710   0.007682  -0.223
## rt_diff_large_small_z               -0.014365   0.276745  -0.052
```

```
## race.ethnicity.5levelBlack                 -0.615144   0.776967  -0.792
## race.ethnicity.5levelMixed                  0.687679   0.770018   0.893
## race.ethnicity.5levelOther                  0.088308   0.891011   0.099
## race.ethnicity.5levelWhite                  0.958944   0.707178   1.356
## demo_race_hispanic1                         0.178810   0.355703   0.503
## interview_age                               0.021788   0.016768   1.299
## hormone_scr_ert_mean:rt_diff_large_small_z  0.008134   0.007337   1.109
##                                            Pr(>|t|)
## (Intercept)                                   0.972
## PDS_score                                  1.24e-08 ***
## hormone_scr_ert_mean                          0.824
## rt_diff_large_small_z                         0.959
## race.ethnicity.5levelBlack                    0.429
## race.ethnicity.5levelMixed                    0.372
## race.ethnicity.5levelOther                    0.921
## race.ethnicity.5levelWhite                    0.175
## demo_race_hispanic1                           0.615
## interview_age                                 0.194
## hormone_scr_ert_mean:rt_diff_large_small_z    0.268
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.0226
## lmer.REML =  12402  Scale est. = 16.838    n = 2011
```

Males

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## cbcl_scr_syn_internal_r ~ PDS_score + hormone_scr_ert_mean *
##     rt_diff_large_small_z + race.ethnicity.5level + demo_race_hispanic +
##     interview_age
##
## Parametric coefficients:
##                                             Estimate Std. Error t value
## (Intercept)                                 3.165433   2.090264   1.514
## PDS_score                                   0.939039   0.236898   3.964
## hormone_scr_ert_mean                        0.013675   0.008398   1.628
## rt_diff_large_small_z                       0.154436   0.302065   0.511
## race.ethnicity.5levelBlack                 -1.147194   0.979330  -1.171
## race.ethnicity.5levelMixed                 -0.192253   0.971665  -0.198
## race.ethnicity.5levelOther                 -1.265398   1.070963  -1.182
## race.ethnicity.5levelWhite                 -0.384432   0.914220  -0.421
## demo_race_hispanic1                         0.543519   0.368173   1.476
## interview_age                               0.004821   0.015803   0.305
## hormone_scr_ert_mean:rt_diff_large_small_z -0.007747   0.008768  -0.884
##                                            Pr(>|t|)
## (Intercept)                                   0.130
## PDS_score                                  7.62e-05 ***
## hormone_scr_ert_mean                          0.104
```

```
## rt_diff_large_small_z                          0.609
## race.ethnicity.5levelBlack                     0.242
## race.ethnicity.5levelMixed                     0.843
## race.ethnicity.5levelOther                     0.238
## race.ethnicity.5levelWhite                     0.674
## demo_race_hispanic1                            0.140
## interview_age                                  0.760
## hormone_scr_ert_mean:rt_diff_large_small_z     0.377
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.00349
## lmer.REML =  13113  Scale est. = 11.048    n = 2108
```

5— Correlation Matrix —

Females

x1	x2	N	corr	p
bmi	interview_age	2661	0.0697979271	0.000314298098
PDS_score	interview_age	2691	0.2677278740	0.000000000000
PDS_score	bmi	2661	0.2664128834	0.000000000000
hormone_scr_ert_mean_z	interview_age	2478	0.2047640705	0.000000000000
hormone_scr_ert_mean_z	bmi	2449	0.2012793974	0.000000000000
hormone_scr_ert_mean_z	PDS_score	2478	0.3093491991	0.000000000000
bisbas_ss_basm_rr_z	interview_age	2683	-0.0350871908	0.069194488613
bisbas_ss_basm_rr_z	bmi	2653	0.0877629223	0.000005981667
bisbas_ss_basm_rr_z	PDS_score	2683	0.0509531725	0.008296938217
bisbas_ss_basm_rr_z	hormone_scr_ert_mean_z	2470	0.0122127956	0.544063120481
rt_diff_large_neutral_z	interview_age	2261	0.0472807273	0.024562711898
rt_diff_large_neutral_z	bmi	2239	0.0043940959	0.835381194609
rt_diff_large_neutral_z	PDS_score	2261	0.0268122235	0.202505893118
rt_diff_large_neutral_z	hormone_scr_ert_mean_z	2088	-0.0118282851	0.589069834934
rt_diff_large_neutral_z	bisbas_ss_basm_rr_z	2255	-0.0106596021	0.612909630741
rt_diff_large_small_z	interview_age	2671	0.0193106014	0.318458362677
rt_diff_large_small_z	bmi	2641	0.0174724764	0.369417222501
rt_diff_large_small_z	PDS_score	2671	0.0215976432	0.264503058525
rt_diff_large_small_z	hormone_scr_ert_mean_z	2461	-0.0045576737	0.821212687813
rt_diff_large_small_z	bisbas_ss_basm_rr_z	2663	-0.0091450752	0.637131540304
rt_diff_large_small_z	rt_diff_large_neutral_z	2242	0.4155393366	0.000000000000
cbcl_scr_syn_internal_r	interview_age	2689	0.0280218610	0.146307300053
cbcl_scr_syn_internal_r	bmi	2659	0.0167186288	0.388820050048
cbcl_scr_syn_internal_r	PDS_score	2689	0.0792744882	0.000038652507
cbcl_scr_syn_internal_r	hormone_scr_ert_mean_z	2476	0.0043682310	0.828012020633
cbcl_scr_syn_internal_r	bisbas_ss_basm_rr_z	2681	-0.0076173230	0.693408003127
cbcl_scr_syn_internal_r	rt_diff_large_neutral_z	2259	0.0171882573	0.414186908144
cbcl_scr_syn_internal_r	rt_diff_large_small_z	2669	0.0239834709	0.215478635656
accumbens_rvsn_ant_z	interview_age	2256	-0.0176046681	0.403280509753
accumbens_rvsn_ant_z	bmi	2233	-0.0344483546	0.103648829348
accumbens_rvsn_ant_z	PDS_score	2256	-0.0297940098	0.157166213595
accumbens_rvsn_ant_z	hormone_scr_ert_mean_z	2082	-0.0078304345	0.721027940906
accumbens_rvsn_ant_z	bisbas_ss_basm_rr_z	2249	0.0250223855	0.235551943639

x1	x2	N	corr	p
accumbens_rvsn_ant_z	rt_diff_large_neutral_z	2121	0.0045421134	0.834400081003
accumbens_rvsn_ant_z	rt_diff_large_small_z	2238	0.0254756628	0.228314410114
accumbens_rvsn_ant_z	cbcl_scr_syn_internal_r	2255	-0.0297104272	0.158426512633
caudate_rvsn_ant_z	interview_age	2265	0.0303692292	0.148494896103
caudate_rvsn_ant_z	bmi	2242	-0.0298576697	0.157573349804
caudate_rvsn_ant_z	PDS_score	2265	-0.0107774820	0.608193482802
caudate_rvsn_ant_z	hormone_scr_ert_mean_z	2091	-0.0199724271	0.361330294647
caudate_rvsn_ant_z	bisbas_ss_basm_rr_z	2258	0.0065029299	0.757442405558
caudate_rvsn_ant_z	rt_diff_large_neutral_z	2129	-0.0041659965	0.847654824712
caudate_rvsn_ant_z	rt_diff_large_small_z	2246	-0.0019492960	0.926436122005
caudate_rvsn_ant_z	cbcl_scr_syn_internal_r	2263	0.0135449263	0.519562969018
caudate_rvsn_ant_z	accumbens_rvsn_ant_z	2244	0.5145685384	0.000000000000
putamen_rvsn_ant_z	interview_age	2266	0.0392854181	0.061515089681
putamen_rvsn_ant_z	bmi	2243	-0.0339508622	0.107946742297
putamen_rvsn_ant_z	PDS_score	2266	0.0030381797	0.885069694363
putamen_rvsn_ant_z	hormone_scr_ert_mean_z	2090	0.0045604841	0.834943351642
putamen_rvsn_ant_z	bisbas_ss_basm_rr_z	2259	-0.0058706069	0.780343301389
putamen_rvsn_ant_z	rt_diff_large_neutral_z	2130	-0.0120496234	0.578342785746
putamen_rvsn_ant_z	rt_diff_large_small_z	2249	0.0032680055	0.876904163941
putamen_rvsn_ant_z	cbcl_scr_syn_internal_r	2264	0.0053204885	0.800253643605
putamen_rvsn_ant_z	accumbens_rvsn_ant_z	2244	0.4849346824	0.000000000000
putamen_rvsn_ant_z	caudate_rvsn_ant_z	2254	0.8097813004	0.000000000000
mOFC_rvsn_ant_z	interview_age	2252	-0.0334969122	0.112022589898
mOFC_rvsn_ant_z	bmi	2229	-0.0175205729	0.408358498865
mOFC_rvsn_ant_z	PDS_score	2252	-0.0525472587	0.012631914351
mOFC_rvsn_ant_z	hormone_scr_ert_mean_z	2078	0.0082874971	0.705753451720
mOFC_rvsn_ant_z	bisbas_ss_basm_rr_z	2245	-0.0078649036	0.709558870238
mOFC_rvsn_ant_z	rt_diff_large_neutral_z	2116	-0.0250250607	0.249875113895
mOFC_rvsn_ant_z	rt_diff_large_small_z	2235	0.0037440260	0.859584288917
mOFC_rvsn_ant_z	cbcl_scr_syn_internal_r	2250	0.0120433394	0.568020656753
mOFC_rvsn_ant_z	accumbens_rvsn_ant_z	2234	0.3797452127	0.000000000000
mOFC_rvsn_ant_z	caudate_rvsn_ant_z	2241	0.3102151425	0.000000000000
mOFC_rvsn_ant_z	putamen_rvsn_ant_z	2242	0.2891538747	0.000000000000
lOFC_rvsn_ant_z	interview_age	2249	-0.0160139514	0.447813042526
lOFC_rvsn_ant_z	bmi	2226	-0.0119228534	0.573959150888
lOFC_rvsn_ant_z	PDS_score	2249	-0.0222548051	0.291449389629
lOFC_rvsn_ant_z	hormone_scr_ert_mean_z	2075	0.0299293639	0.172935723486
lOFC_rvsn_ant_z	bisbas_ss_basm_rr_z	2242	0.0045464870	0.829645588247
lOFC_rvsn_ant_z	rt_diff_large_neutral_z	2115	-0.0252563993	0.245634442726
lOFC_rvsn_ant_z	rt_diff_large_small_z	2232	-0.0171991358	0.416698868170
lOFC_rvsn_ant_z	cbcl_scr_syn_internal_r	2247	0.0012681317	0.952092531950
lOFC_rvsn_ant_z	accumbens_rvsn_ant_z	2232	0.4248318733	0.000000000000
lOFC_rvsn_ant_z	caudate_rvsn_ant_z	2239	0.4743813951	0.000000000000
lOFC_rvsn_ant_z	putamen_rvsn_ant_z	2240	0.4165942818	0.000000000000
lOFC_rvsn_ant_z	mOFC_rvsn_ant_z	2242	0.6925371811	0.000000000000
accumbens_posvsneg_feedback_z	interview_age	2257	0.0343638617	0.102651612493
accumbens_posvsneg_feedback_z	bmi	2235	0.0075050325	0.722879669049
accumbens_posvsneg_feedback_z	PDS_score	2257	0.0149119327	0.478894689219
accumbens_posvsneg_feedback_z	hormone_scr_ert_mean_z	2082	0.0027594483	0.899862282305
accumbens_posvsneg_feedback_z	bisbas_ss_basm_rr_z	2250	0.0061966612	0.768931420189
accumbens_posvsneg_feedback_z	rt_diff_large_neutral_z	2123	-0.0021614159	0.920716744390
accumbens_posvsneg_feedback_z	rt_diff_large_small_z	2238	0.0049986395	0.813166890248

x1	x2	N	corr	p
accumbens_posvsneg_feedback_z	cbcl_scr_syn_internal_r	2255	0.0116099485	0.581611291891
accumbens_posvsneg_feedback_z	accumbens_rvsn_ant_z	2242	0.0089619417	0.671479993564
accumbens_posvsneg_feedback_z	caudate_rvsn_ant_z	2243	-0.0048259996	0.819308228178
accumbens_posvsneg_feedback_z	putamen_rvsn_ant_z	2243	0.0097795952	0.643423394637
accumbens_posvsneg_feedback_z	mOFC_rvsn_ant_z	2232	-0.0075138873	0.722744973205
accumbens_posvsneg_feedback_z	lOFC_rvsn_ant_z	2229	-0.0131584900	0.534651731652
caudate_posvsneg_feedback_z	interview_age	2261	-0.0029821318	0.887299445611
caudate_posvsneg_feedback_z	bmi	2239	0.0053571202	0.799998637811
caudate_posvsneg_feedback_z	PDS_score	2261	0.0156764203	0.456243340898
caudate_posvsneg_feedback_z	hormone_scr_ert_mean_z	2086	-0.0003467373	0.987372444926
caudate_posvsneg_feedback_z	bisbas_ss_basm_rr_z	2254	-0.0288765617	0.170537774885
caudate_posvsneg_feedback_z	rt_diff_large_neutral_z	2126	0.0107985729	0.618745975490
caudate_posvsneg_feedback_z	rt_diff_large_small_z	2243	0.0049145536	0.816051450836
caudate_posvsneg_feedback_z	cbcl_scr_syn_internal_r	2259	-0.0122326471	0.561169909466
caudate_posvsneg_feedback_z	accumbens_rvsn_ant_z	2237	0.0045533418	0.829580320237
caudate_posvsneg_feedback_z	caudate_rvsn_ant_z	2245	-0.0086356548	0.682576777747
caudate_posvsneg_feedback_z	putamen_rvsn_ant_z	2247	0.0209566159	0.320732897943
caudate_posvsneg_feedback_z	mOFC_rvsn_ant_z	2236	0.0205974322	0.330286840921
caudate_posvsneg_feedback_z	lOFC_rvsn_ant_z	2232	0.0299669415	0.156985141294
caudate_posvsneg_feedback_z	accumbens_posvsneg_feedback_z	2241	0.5800509333	0.000000000000
putamen_posvsneg_feedback_z	interview_age	2261	-0.0073977705	0.725157707980
putamen_posvsneg_feedback_z	bmi	2239	0.0036687603	0.862256613575
putamen_posvsneg_feedback_z	PDS_score	2261	0.0130635838	0.534694340282
putamen_posvsneg_feedback_z	hormone_scr_ert_mean_z	2089	0.0019268572	0.929864361852
putamen_posvsneg_feedback_z	bisbas_ss_basm_rr_z	2254	-0.0170204790	0.419274939815
putamen_posvsneg_feedback_z	rt_diff_large_neutral_z	2128	0.0085020630	0.695073777712
putamen_posvsneg_feedback_z	rt_diff_large_small_z	2242	-0.0343094623	0.104350830599
putamen_posvsneg_feedback_z	cbcl_scr_syn_internal_r	2259	-0.0123043428	0.558876705766
putamen_posvsneg_feedback_z	accumbens_rvsn_ant_z	2239	0.0095088955	0.652925680519
putamen_posvsneg_feedback_z	caudate_rvsn_ant_z	2246	-0.0201672507	0.339410294929
putamen_posvsneg_feedback_z	putamen_rvsn_ant_z	2249	0.0080184668	0.703901285993
putamen_posvsneg_feedback_z	mOFC_rvsn_ant_z	2235	0.0190106547	0.369013880871
putamen_posvsneg_feedback_z	lOFC_rvsn_ant_z	2232	0.0132621916	0.531160053690
putamen_posvsneg_feedback_z	accumbens_posvsneg_feedback_z	2242	0.5329879024	0.000000000000
putamen_posvsneg_feedback_z	caudate_posvsneg_feedback_z	2250	0.7756786602	0.000000000000
mOFC_posvsneg_feedback_z	interview_age	2262	-0.0088647179	0.673473574054
mOFC_posvsneg_feedback_z	bmi	2239	-0.0104805459	0.620137199913
mOFC_posvsneg_feedback_z	PDS_score	2262	0.0054684605	0.794909412491
mOFC_posvsneg_feedback_z	hormone_scr_ert_mean_z	2086	0.0249580579	0.254537468016
mOFC_posvsneg_feedback_z	bisbas_ss_basm_rr_z	2255	0.0093978403	0.655571134080
mOFC_posvsneg_feedback_z	rt_diff_large_neutral_z	2128	0.0188569646	0.384605042405
mOFC_posvsneg_feedback_z	rt_diff_large_small_z	2244	0.0135142797	0.522266349922
mOFC_posvsneg_feedback_z	cbcl_scr_syn_internal_r	2260	0.0244286477	0.245700713865
mOFC_posvsneg_feedback_z	accumbens_rvsn_ant_z	2240	0.0441846149	0.036523439372
mOFC_posvsneg_feedback_z	caudate_rvsn_ant_z	2248	0.0112810996	0.592932586705
mOFC_posvsneg_feedback_z	putamen_rvsn_ant_z	2249	0.0259845687	0.218021830094
mOFC_posvsneg_feedback_z	mOFC_rvsn_ant_z	2238	0.0820669919	0.000101585629
mOFC_posvsneg_feedback_z	lOFC_rvsn_ant_z	2236	0.0474402320	0.024878466258
mOFC_posvsneg_feedback_z	accumbens_posvsneg_feedback_z	2247	0.4072062941	0.000000000000
mOFC_posvsneg_feedback_z	caudate_posvsneg_feedback_z	2245	0.4064357217	0.000000000000
mOFC_posvsneg_feedback_z	putamen_posvsneg_feedback_z	2246	0.3076669739	0.000000000000
lOFC_posvsneg_feedback_z	interview_age	2259	-0.0176092268	0.402845852470

x1	x2	N	corr	p
lOFC_posvsneg_feedback_z	bmi	2237	0.0049682173	0.814323949581
lOFC_posvsneg_feedback_z	PDS_score	2259	0.0012942124	0.950978120757
lOFC_posvsneg_feedback_z	hormone_scr_ert_mean_z	2083	0.0459256088	0.036092158446
lOFC_posvsneg_feedback_z	bisbas_ss_basm_rr_z	2252	-0.0119157804	0.571956537020
lOFC_posvsneg_feedback_z	rt_diff_large_neutral_z	2125	0.0042629481	0.844299080466
lOFC_posvsneg_feedback_z	rt_diff_large_small_z	2241	0.0025625947	0.903498011085
lOFC_posvsneg_feedback_z	cbcl_scr_syn_internal_r	2257	-0.0120998965	0.565600286343
lOFC_posvsneg_feedback_z	accumbens_rvsn_ant_z	2237	0.0093897719	0.657137309959
lOFC_posvsneg_feedback_z	caudate_rvsn_ant_z	2246	-0.0201125706	0.340721650078
lOFC_posvsneg_feedback_z	putamen_rvsn_ant_z	2247	0.0028936748	0.890958492773
lOFC_posvsneg_feedback_z	mOFC_rvsn_ant_z	2236	0.0321743499	0.128272144745
lOFC_posvsneg_feedback_z	lOFC_rvsn_ant_z	2235	0.0298396860	0.158474892725
lOFC_posvsneg_feedback_z	accumbens_posvsneg_feedback_z	2242	0.4374011548	0.000000000000
lOFC_posvsneg_feedback_z	caudate_posvsneg_feedback_z	2242	0.5030177996	0.000000000000
lOFC_posvsneg_feedback_z	putamen_posvsneg_feedback_z	2245	0.4093071009	0.000000000000
lOFC_posvsneg_feedback_z	mOFC_posvsneg_feedback_z	2252	0.7353025060	0.000000000000

Males

x1	x2	N	corr	p
bmi	interview_age	3006	0.09901807134	0.000000053286912882200
PDS_score	interview_age	3033	0.14179694234	0.000000000000004440892
PDS_score	bmi	3006	0.21893123996	0.000000000000000000000
hormone_scr_ert_mean_z	interview_age	2826	0.14676432362	0.000000000000004440892
hormone_scr_ert_mean_z	bmi	2799	0.17501149364	0.000000000000000000000
hormone_scr_ert_mean_z	PDS_score	2826	0.22501636634	0.000000000000000000000
bisbas_ss_basm_rr_z	interview_age	3018	-0.00711264449	0.696103546934185635209
bisbas_ss_basm_rr_z	bmi	2992	0.01234488559	0.499676628006185286068
bisbas_ss_basm_rr_z	PDS_score	3018	0.04156684036	0.022396787316091071318
bisbas_ss_basm_rr_z	hormone_scr_ert_mean_z	2812	-0.05573620783	0.003110712632004464240
rt_diff_large_neutral_z	interview_age	2449	0.02942860483	0.145415809060271072894
rt_diff_large_neutral_z	bmi	2429	-0.03712278322	0.067357539408583022578
rt_diff_large_neutral_z	PDS_score	2449	-0.09258922322	0.000004442678209315432
rt_diff_large_neutral_z	hormone_scr_ert_mean_z	2292	-0.13343296903	0.000000000142408751458
rt_diff_large_neutral_z	bisbas_ss_basm_rr_z	2440	0.08074422076	0.000065257074379765356
rt_diff_large_small_z	interview_age	3008	-0.01869458104	0.305376337257739827180
rt_diff_large_small_z	bmi	2982	0.02145298845	0.241541789988178212667
rt_diff_large_small_z	PDS_score	3008	0.00588371427	0.747026695535115026203
rt_diff_large_small_z	hormone_scr_ert_mean_z	2804	-0.03571543384	0.058625337335177274412
rt_diff_large_small_z	bisbas_ss_basm_rr_z	2993	0.06601788795	0.000301320668861571050
rt_diff_large_small_z	rt_diff_large_neutral_z	2430	0.43250892828	0.000000000000000000000
cbcl_scr_syn_internal_r	interview_age	3033	0.00573279218	0.752311698461172628782
cbcl_scr_syn_internal_r	bmi	3006	0.03620027847	0.047191481252858213935
cbcl_scr_syn_internal_r	PDS_score	3033	0.02172795021	0.231593401383036301411

x1	x2	N	corr	p
cbcl_scr_syn_internal_r	hormone_scr_ert_mean_z	2826	-0.02461338528	0.190849508118435373660
cbcl_scr_syn_internal_r	bisbas_ss_basm_rr_z	3018	-0.02316089276	0.203366760762150100561
cbcl_scr_syn_internal_r	rt_diff_large_neutral_z	2449	0.02837198444	0.160431833537241663734
cbcl_scr_syn_internal_r	rt_diff_large_small_z	3008	-0.01580240127	0.386281640975641549218
accumbens_rvsn_ant_z	interview_age	2432	-0.00084375858	0.966826475335313961779
accumbens_rvsn_ant_z	bmi	2413	0.03494566382	0.086117033422123734354
accumbens_rvsn_ant_z	PDS_score	2432	0.09349996430	0.000003860956267143223
accumbens_rvsn_ant_z	hormone_scr_ert_mean_z	2272	0.06348981340	0.002464526208553863285
accumbens_rvsn_ant_z	bisbas_ss_basm_rr_z	2422	0.07123926020	0.000450464160367314292
accumbens_rvsn_ant_z	rt_diff_large_neutral_z	2262	-0.00907889919	0.666056079716124127543
accumbens_rvsn_ant_z	rt_diff_large_small_z	2415	0.05553112830	0.006340347119055067537
accumbens_rvsn_ant_z	cbcl_scr_syn_internal_r	2432	-0.06227536670	0.002122505509326799711
caudate_rvsn_ant_z	interview_age	2443	0.02975993276	0.141424072144402668272
caudate_rvsn_ant_z	bmi	2423	-0.01318058163	0.516665465794564182644
caudate_rvsn_ant_z	PDS_score	2443	0.04011023540	0.047445653555861166950
caudate_rvsn_ant_z	hormone_scr_ert_mean_z	2284	-0.01078264395	0.606519125480552201424
caudate_rvsn_ant_z	bisbas_ss_basm_rr_z	2433	0.06594087372	0.001136184985245147772
caudate_rvsn_ant_z	rt_diff_large_neutral_z	2274	0.04182043679	0.046147126631919999085
caudate_rvsn_ant_z	rt_diff_large_small_z	2424	0.02662542670	0.190048384698160433004
caudate_rvsn_ant_z	cbcl_scr_syn_internal_r	2443	-0.01689067442	0.404008984462626674627
caudate_rvsn_ant_z	accumbens_rvsn_ant_z	2409	0.62713172383	0.000000000000000000000
putamen_rvsn_ant_z	interview_age	2436	0.02661835161	0.189071848825972388397
putamen_rvsn_ant_z	bmi	2416	-0.00797032184	0.695377955822406690345
putamen_rvsn_ant_z	PDS_score	2436	0.02823487235	0.163583924174724337774
putamen_rvsn_ant_z	hormone_scr_ert_mean_z	2280	-0.00915312893	0.662237983022925913446
putamen_rvsn_ant_z	bisbas_ss_basm_rr_z	2426	0.01096520825	0.589319042011408722459
putamen_rvsn_ant_z	rt_diff_large_neutral_z	2268	0.03129504198	0.136244361762121846127
putamen_rvsn_ant_z	rt_diff_large_small_z	2417	0.01784322370	0.380572288308834938420
putamen_rvsn_ant_z	cbcl_scr_syn_internal_r	2436	-0.02285002389	0.259594231344143500095
putamen_rvsn_ant_z	accumbens_rvsn_ant_z	2402	0.56800319434	0.000000000000000000000
putamen_rvsn_ant_z	caudate_rvsn_ant_z	2419	0.79874635823	0.000000000000000000000
mOFC_rvsn_ant_z	interview_age	2430	0.01440214017	0.477936435446448149023
mOFC_rvsn_ant_z	bmi	2411	0.05350017593	0.008601948515116308869
mOFC_rvsn_ant_z	PDS_score	2430	0.13214927647	0.000000000061663119055
mOFC_rvsn_ant_z	hormone_scr_ert_mean_z	2271	0.08709888959	0.000032342359700621159
mOFC_rvsn_ant_z	bisbas_ss_basm_rr_z	2420	0.06955791549	0.000616664579573544813
mOFC_rvsn_ant_z	rt_diff_large_neutral_z	2262	-0.05152304302	0.014256513134866644066
mOFC_rvsn_ant_z	rt_diff_large_small_z	2412	0.00686720049	0.736047623103460058047

x1	x2	N	corr	p
mOFC_rvsn_ant_z	cbcl_scr_syn_internal_r	2430	-0.07809027945	0.00011650443258437448 4
mOFC_rvsn_ant_z	accumbens_rvsn_ant_z	2402	0.51172058771	0.0000000000000000000
mOFC_rvsn_ant_z	caudate_rvsn_ant_z	2404	0.40706857542	0.0000000000000000000
mOFC_rvsn_ant_z	putamen_rvsn_ant_z	2398	0.34221664046	0.0000000000000000000
lOFC_rvsn_ant_z	interview_age	2420	0.03118850889	0.125066015272382369261
lOFC_rvsn_ant_z	bmi	2401	0.04067463653	0.046278531655140620060
lOFC_rvsn_ant_z	PDS_score	2420	0.11681709039	0.000000008242939220082
lOFC_rvsn_ant_z	hormone_scr_ert_mean_z	2263	0.05447634656	0.009542331440759443950
lOFC_rvsn_ant_z	bisbas_ss_basm_rr_z	2410	0.11490301248	0.000000015439444833731
lOFC_rvsn_ant_z	rt_diff_large_neutral_z	2252	-0.01544670923	0.463763352909283943504
lOFC_rvsn_ant_z	rt_diff_large_small_z	2403	0.01414874202	0.488152127131023849671
lOFC_rvsn_ant_z	cbcl_scr_syn_internal_r	2420	-0.08300084935	0.000043501891610286947
lOFC_rvsn_ant_z	accumbens_rvsn_ant_z	2397	0.56658536016	0.0000000000000000000
lOFC_rvsn_ant_z	caudate_rvsn_ant_z	2396	0.53734794888	0.0000000000000000000
lOFC_rvsn_ant_z	putamen_rvsn_ant_z	2389	0.46769871228	0.0000000000000000000
lOFC_rvsn_ant_z	mOFC_rvsn_ant_z	2408	0.76198016051	0.0000000000000000000
accumbens_posvsneg_feedback_z	interview_age	2434	0.01041894634	0.607409505324864928966
accumbens_posvsneg_feedback_z	bmi	2414	0.01734329105	0.394357576166633361225
accumbens_posvsneg_feedback_z	PDS_score	2434	-0.04003535161	0.048274425847994129057
accumbens_posvsneg_feedback_z	hormone_scr_ert_mean_z	2277	-0.03458518670	0.098959181750015057233
accumbens_posvsneg_feedback_z	bisbas_ss_basm_rr_z	2424	-0.04218206657	0.037833819039651217508
accumbens_posvsneg_feedback_z	rt_diff_large_neutral_z	2264	0.01456738215	0.488440099597032162393
accumbens_posvsneg_feedback_z	rt_diff_large_small_z	2415	-0.02776877842	0.172508436356795247235
accumbens_posvsneg_feedback_z	cbcl_scr_syn_internal_r	2434	-0.00083599965	0.967117836419680187987
accumbens_posvsneg_feedback_z	accumbens_rvsn_ant_z	2406	-0.03700613104	0.069544528901521296405
accumbens_posvsneg_feedback_z	caudate_rvsn_ant_z	2409	-0.01908688863	0.349060360032355188054
accumbens_posvsneg_feedback_z	putamen_rvsn_ant_z	2402	0.00382375503	0.851420603572902612299
accumbens_posvsneg_feedback_z	mOFC_rvsn_ant_z	2400	-0.06026804789	0.003140234572893918497
accumbens_posvsneg_feedback_z	lOFC_rvsn_ant_z	2393	-0.03467304719	0.089929415701100356983
caudate_posvsneg_feedback_z	interview_age	2377	0.00006108203	0.997625134911606092913
caudate_posvsneg_feedback_z	bmi	2357	0.00481609269	0.815222903334562376543
caudate_posvsneg_feedback_z	PDS_score	2377	-0.00943675608	0.645622143302058137948
caudate_posvsneg_feedback_z	hormone_scr_ert_mean_z	2219	-0.04899073229	0.021007160421711690290
caudate_posvsneg_feedback_z	bisbas_ss_basm_rr_z	2368	-0.00907389740	0.658973496178778317400
caudate_posvsneg_feedback_z	rt_diff_large_neutral_z	2208	0.03678218426	0.083992294065906136780
caudate_posvsneg_feedback_z	rt_diff_large_small_z	2360	-0.00474928558	0.817626686912577227417

x1	x2	N	corr	p
caudate_posvsneg_feedback_z	cbcl_scr_syn_internal_r	2377	-0.02996828687	0.144112075235352854463
caudate_posvsneg_feedback_z	accumbens_rvsn_ant_z	2341	-0.01199425370	0.561888003836056748597
caudate_posvsneg_feedback_z	caudate_rvsn_ant_z	2350	0.04043208349	0.050021919351130872400
caudate_posvsneg_feedback_z	putamen_rvsn_ant_z	2344	0.02213305434	0.284111587194208814466
caudate_posvsneg_feedback_z	mOFC_rvsn_ant_z	2336	-0.01481136222	0.474286815717435139561
caudate_posvsneg_feedback_z	lOFC_rvsn_ant_z	2328	0.03033803970	0.143373979798064876690
caudate_posvsneg_feedback_z	accumbens_posvsneg_feedback_z	2352	0.58899369286	0.000000000000000000000
putamen_posvsneg_feedback_z	interview_age	2383	-0.00273729438	0.893755378282142576296
putamen_posvsneg_feedback_z	bmi	2363	0.01339563876	0.515139440116939351100
putamen_posvsneg_feedback_z	PDS_score	2383	-0.00398157413	0.845969768641449348934
putamen_posvsneg_feedback_z	hormone_scr_ert_mean_z	2224	-0.06046319246	0.004338924756839723784
putamen_posvsneg_feedback_z	bisbas_ss_basm_rr_z	2374	-0.00421755166	0.837269421559390991661
putamen_posvsneg_feedback_z	rt_diff_large_neutral_z	2213	0.06339714257	0.002848055238067637163
putamen_posvsneg_feedback_z	rt_diff_large_small_z	2365	0.01063571486	0.605177483100072910460
putamen_posvsneg_feedback_z	cbcl_scr_syn_internal_r	2383	0.00783654827	0.702198844105519359715
putamen_posvsneg_feedback_z	accumbens_rvsn_ant_z	2346	-0.01361840648	0.509707197566256597909
putamen_posvsneg_feedback_z	caudate_rvsn_ant_z	2355	0.03139557533	0.127723235598041107153
putamen_posvsneg_feedback_z	putamen_rvsn_ant_z	2349	0.03130189416	0.129353343579055479751
putamen_posvsneg_feedback_z	mOFC_rvsn_ant_z	2343	-0.01835094683	0.374610692444822257485
putamen_posvsneg_feedback_z	lOFC_rvsn_ant_z	2334	0.00776312375	0.707769938297894363188
putamen_posvsneg_feedback_z	accumbens_posvsneg_feedback_z	2357	0.52461122409	0.000000000000000000000
putamen_posvsneg_feedback_z	caudate_posvsneg_feedback_z	2368	0.80040436905	0.000000000000000000000
mOFC_posvsneg_feedback_z	interview_age	2431	0.01562230752	0.441352458907005917865
mOFC_posvsneg_feedback_z	bmi	2411	0.01660300859	0.415144871737123555278
mOFC_posvsneg_feedback_z	PDS_score	2431	-0.00454404692	0.822811038423835627853
mOFC_posvsneg_feedback_z	hormone_scr_ert_mean_z	2270	-0.00648735538	0.757382444398246201800
mOFC_posvsneg_feedback_z	bisbas_ss_basm_rr_z	2421	0.05443269000	0.007386655993865787195
mOFC_posvsneg_feedback_z	rt_diff_large_neutral_z	2264	-0.00602943673	0.774316104406563177065
mOFC_posvsneg_feedback_z	rt_diff_large_small_z	2412	0.01590365520	0.434975040317294059378
mOFC_posvsneg_feedback_z	cbcl_scr_syn_internal_r	2431	-0.00303187575	0.881229635422520196641
mOFC_posvsneg_feedback_z	accumbens_rvsn_ant_z	2404	0.04188007933	0.040049463891809855554
mOFC_posvsneg_feedback_z	caudate_rvsn_ant_z	2403	0.01998395261	0.327476474137658346564
mOFC_posvsneg_feedback_z	putamen_rvsn_ant_z	2397	0.01807310484	0.376450729743789791470
mOFC_posvsneg_feedback_z	mOFC_rvsn_ant_z	2402	0.04659451273	0.022391628355140191786
mOFC_posvsneg_feedback_z	lOFC_rvsn_ant_z	2396	0.05338257790	0.008961449727728609815
mOFC_posvsneg_feedback_z	accumbens_posvsneg_feedback_z	2406	0.41319572902	0.000000000000000000000
mOFC_posvsneg_feedback_z	caudate_posvsneg_feedback_z	2337	0.36670321807	0.000000000000000000000
mOFC_posvsneg_feedback_z	putamen_posvsneg_feedback_z	2344	0.31457601041	0.000000000000000000000
lOFC_posvsneg_feedback_z	interview_age	2422	0.01411819958	0.487377193525776908345

x1	x2	N	corr	p
lOFC_posvsneg_feedback_z	bmi	2402	0.02558697547	0.209996400457910681325
lOFC_posvsneg_feedback_z	PDS_score	2422	0.01321626623	0.515617576864819460170
lOFC_posvsneg_feedback_z	hormone_scr_ert_mean_z	2264	0.00787856319	0.707903889264451358088
lOFC_posvsneg_feedback_z	bisbas_ss_basm_rr_z	2412	0.04385553220	0.031259175508701719792
lOFC_posvsneg_feedback_z	rt_diff_large_neutral_z	2254	0.01194555678	0.570825212162784145775
lOFC_posvsneg_feedback_z	rt_diff_large_small_z	2405	0.02515424100	0.217524326397522393961
lOFC_posvsneg_feedback_z	cbcl_scr_syn_internal_r	2422	-0.00437633305	0.829560005193368255050
lOFC_posvsneg_feedback_z	accumbens_rvsn_ant_z	2396	0.03670423250	0.072446584029092209178
lOFC_posvsneg_feedback_z	caudate_rvsn_ant_z	2394	0.03348496100	0.101427283265459911021
lOFC_posvsneg_feedback_z	putamen_rvsn_ant_z	2389	0.03889287836	0.057340413080358754172
lOFC_posvsneg_feedback_z	mOFC_rvsn_ant_z	2394	0.06502538799	0.001456048624377315193
lOFC_posvsneg_feedback_z	lOFC_rvsn_ant_z	2389	0.08237445186	0.000055541551306603765
lOFC_posvsneg_feedback_z	accumbens_posvsneg_feedback_z	2399	0.42266226996	0.000000000000000000000
lOFC_posvsneg_feedback_z	caudate_posvsneg_feedback_z	2333	0.49190510904	0.000000000000000000000
lOFC_posvsneg_feedback_z	putamen_posvsneg_feedback_z	2339	0.41713448174	0.000000000000000000000
lOFC_posvsneg_feedback_z	mOFC_posvsneg_feedback_z	2416	0.74526572267	0.000000000000000000000