Supplement A

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

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Results for Sample 1

1—Internalizing~Puberty—

1.1 Model: CBCL internalizing factor ~ PDS

Female participants

```
##
## 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)                 3.364047   1.858610   1.810 0.070413 .
## PDS_score                   0.599362   0.157687   3.801 0.000147 ***
## race.ethnicity.5levelBlack  0.135086   0.792591   0.170 0.864681
## race.ethnicity.5levelMixed  1.837143   0.789510   2.327 0.020044 *
## race.ethnicity.5levelOther  2.439633   0.901292   2.707 0.006837 **
## race.ethnicity.5levelWhite  1.354995   0.742020   1.826 0.067950 .
## interview_age              -0.005834   0.014591  -0.400 0.689307
## demo_race_hispanic1         0.216061   0.316107   0.684 0.494348
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.0121
## lmer.REML =  16403  Scale est. = 13.201    n = 2640


##                                  stdcoef        stdse
## X(Intercept)                 0.000000000 0.00000000
## XPDS_score                   0.079678274 0.02096269
## Xrace.ethnicity.5levelBlack  0.008788022 0.05156209
## Xrace.ethnicity.5levelMixed  0.111225638 0.04779910
## Xrace.ethnicity.5levelOther  0.093887511 0.03468556
## Xrace.ethnicity.5levelWhite  0.116925862 0.06403075
## Xinterview_age              -0.007909539 0.01978176
## Xdemo_race_hispanic1         0.015489194 0.02266145
```

Male participants

```
##
## 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)               2.255e+00  1.777e+00   1.269  0.20458
## PDS_score                 8.334e-01  1.980e-01   4.209 2.64e-05 ***
## race.ethnicity.5levelBlack 1.377e+00  7.416e-01   1.856  0.06353 .
## race.ethnicity.5levelMixed 2.093e+00  7.431e-01   2.817  0.00488 **
## race.ethnicity.5levelOther 1.947e+00  8.509e-01   2.288  0.02222 *
## race.ethnicity.5levelWhite 1.540e+00  6.956e-01   2.214  0.02693 *
## interview_age            -3.293e-05  1.394e-02  -0.002  0.99812
## demo_race_hispanic1       2.449e-01  3.000e-01   0.816  0.41442
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
## 
## 
## R-sq.(adj) =  0.00708
## lmer.REML =  17774  Scale est. = 15.934    n = 2858


##                                 stdcoef       stdse
## X(Intercept)              0.000000e+00 0.00000000
## XPDS_score                8.295425e-02 0.01970691
## Xrace.ethnicity.5levelBlack 8.862927e-02 0.04774848
## Xrace.ethnicity.5levelMixed 1.244175e-01 0.04416352
## Xrace.ethnicity.5levelOther 7.603352e-02 0.03323393
## Xrace.ethnicity.5levelWhite 1.327504e-01 0.05996650
## Xinterview_age           -4.489059e-05 0.01900751
## Xdemo_race_hispanic1      1.769753e-02 0.02168112
```

1.2 Model: CBCL Anxious-Depressed ~ PDS

Female participants

```
## 
## 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)               1.738267   1.046826   1.661   0.0969 .
## PDS_score                 0.192989   0.088633   2.177   0.0295 *
## race.ethnicity.5levelBlack 0.034518   0.442769   0.078   0.9379
## race.ethnicity.5levelMixed 0.899818   0.441294   2.039   0.0415 *
## race.ethnicity.5levelOther 0.960117   0.504377   1.904   0.0571 .
## race.ethnicity.5levelWhite 0.798545   0.414637   1.926   0.0542 .
## interview_age            -0.002110   0.008232  -0.256   0.7977
## demo_race_hispanic1       0.024025   0.176180   0.136   0.8915
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
## 
```

```
##
## R-sq.(adj) =  0.00724
## lmer.REML =  13376  Scale est. = 4.9862    n = 2640


##                                   stdcoef      stdse
## X(Intercept)                 0.000000000 0.00000000
## XPDS_score                   0.045939845 0.02109848
## Xrace.ethnicity.5levelBlack  0.004021024 0.05157799
## Xrace.ethnicity.5levelMixed  0.097548974 0.04784057
## Xrace.ethnicity.5levelOther  0.066162685 0.03475717
## Xrace.ethnicity.5levelWhite  0.123389443 0.06406881
## Xinterview_age              -0.005121910 0.01998372
## Xdemo_race_hispanic1         0.003084070 0.02261604
```

Male participants

```
##
## 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)                 1.302113   0.993063   1.311  0.18989
## PDS_score                   0.415556   0.110380   3.765  0.00017 ***
## race.ethnicity.5levelBlack  0.621219   0.413296   1.503  0.13293
## race.ethnicity.5levelMixed  1.145379   0.414380   2.764  0.00575 **
## race.ethnicity.5levelOther  1.102501   0.473565   2.328  0.01998 *
## race.ethnicity.5levelWhite  1.048614   0.387997   2.703  0.00692 **
## interview_age              -0.003189   0.007794  -0.409  0.68243
## demo_race_hispanic1         0.097466   0.166064   0.587  0.55731
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.00662
## lmer.REML =  14459  Scale est. = 6.6656    n = 2858


##                                   stdcoef      stdse
## X(Intercept)                 0.00000000 0.00000000
## XPDS_score                   0.07436588 0.01975302
## Xrace.ethnicity.5levelBlack  0.07190757 0.04783996
## Xrace.ethnicity.5levelMixed  0.12238938 0.04427851
## Xrace.ethnicity.5levelOther  0.07741939 0.03325447
## Xrace.ethnicity.5levelWhite  0.16252548 0.06013600
## Xinterview_age              -0.00781615 0.01910142
## Xdemo_race_hispanic1         0.01266408 0.02157727
```

1.3 Model: CBCL Withdrawn-Depressed ~ PDS

Female participants

```
##
## 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)                 0.560842   0.544323   1.030   0.3029
## PDS_score                   0.192902   0.046013   4.192 2.85e-05 ***
## race.ethnicity.5levelBlack  0.185794   0.228387   0.814   0.4160
## race.ethnicity.5levelMixed  0.401589   0.227843   1.763   0.0781 .
## race.ethnicity.5levelOther  0.569861   0.260772   2.185   0.0290 *
## race.ethnicity.5levelWhite  0.218364   0.213975   1.021   0.3076
## interview_age              -0.002093   0.004288  -0.488   0.6254
## demo_race_hispanic1         0.175618   0.090490   1.941   0.0524 .
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.0126
## lmer.REML = 9937.2  Scale est. = 1.6344    n = 2640


##                              stdcoef      stdse
## X(Intercept)              0.000000000 0.00000000
## XPDS_score                0.088652509 0.02114652
## Xrace.ethnicity.5levelBlack  0.041784681 0.05136371
## Xrace.ethnicity.5levelMixed  0.084051987 0.04768728
## Xrace.ethnicity.5levelOther  0.075815285 0.03469358
## Xrace.ethnicity.5levelWhite  0.065141430 0.06383239
## Xinterview_age           -0.009811582 0.02009505
## Xdemo_race_hispanic1      0.043523846 0.02242636
```

Male participants

```
##
## 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)                 0.4354800  0.5588798   0.779  0.43593
## PDS_score                   0.1837485  0.0624541   2.942  0.00329 **
```

```
## race.ethnicity.5levelBlack  0.5741763  0.2317685   2.477  0.01329 *
## race.ethnicity.5levelMixed  0.6116549  0.2335881   2.619  0.00888 **
## race.ethnicity.5levelOther  0.4626746  0.2672891   1.731  0.08356 .
## race.ethnicity.5levelWhite  0.3807318  0.2176624   1.749  0.08037 .
## interview_age             -0.0003348  0.0043983  -0.076  0.93932
## demo_race_hispanic1        0.0301344  0.0889321   0.339  0.73475
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.00631
## lmer.REML =  11226  Scale est. = 2.0767    n = 2858


##                                  stdcoef        stdse
## X(Intercept)                 0.000000000 0.00000000
## XPDS_score                   0.058036162 0.01972584
## Xrace.ethnicity.5levelBlack  0.117302035 0.04734942
## Xrace.ethnicity.5levelMixed  0.115353697 0.04405303
## Xrace.ethnicity.5levelOther  0.057342539 0.03312702
## Xrace.ethnicity.5levelWhite  0.104149075 0.05954149
## Xinterview_age              -0.001448337 0.01902550
## Xdemo_race_hispanic1         0.006910594 0.02039441
```

1.4 Model: CBCL Depressed DSM-5 ~ PDS

Female participants

```
##
## 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)                 0.500757   0.632217   0.792 0.428394
## PDS_score                   0.191889   0.053684   3.574 0.000357 ***
## race.ethnicity.5levelBlack  0.220848   0.266590   0.828 0.407508
## race.ethnicity.5levelMixed  0.677402   0.266390   2.543 0.011051 *
## race.ethnicity.5levelOther  0.837469   0.304982   2.746 0.006075 **
## race.ethnicity.5levelWhite  0.519547   0.249759   2.080 0.037604 *
## interview_age              -0.001794   0.004979  -0.360 0.718640
## demo_race_hispanic1         0.107590   0.104881   1.026 0.305064
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.0102
## lmer.REML =  10738  Scale est. = 1.7625    n = 2640


##                                  stdcoef        stdse
```

```
## X(Intercept)                      0.000000000 0.00000000
## XPDS_score                        0.075266482 0.02105703
## Xrace.ethnicity.5levelBlack  0.042391288 0.05117131
## Xrace.ethnicity.5levelMixed  0.121006828 0.04758623
## Xrace.ethnicity.5levelOther  0.095094061 0.03463058
## Xrace.ethnicity.5levelWhite  0.132281618 0.06359093
## Xinterview_age                    -0.007176567 0.01991746
## Xdemo_race_hispanic1              0.022757644 0.02218454
```

Male participants

```
##
## 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)                 0.4836320  0.6822550   0.709  0.47846
## PDS_score                   0.2271161  0.0760293   2.987  0.00284 **
## race.ethnicity.5levelBlack  0.4981842  0.2837086   1.756  0.07920 .
## race.ethnicity.5levelMixed  0.6660665  0.2849471   2.338  0.01948 *
## race.ethnicity.5levelOther  0.5834181  0.3259348   1.790  0.07356 .
## race.ethnicity.5levelWhite  0.5019968  0.2663551   1.885  0.05957 .
## interview_age               0.0006022  0.0053611   0.112  0.91057
## demo_race_hispanic1        -0.0459753  0.1125485  -0.408  0.68294
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.00281
## lmer.REML =  12332  Scale est. = 2.9434    n = 2858
```

```
##                                 stdcoef        stdse
## X(Intercept)                 0.000000000 0.00000000
## XPDS_score                   0.059115152 0.01978936
## Xrace.ethnicity.5levelBlack  0.083873797 0.04776491
## Xrace.ethnicity.5levelMixed  0.103518696 0.04428590
## Xrace.ethnicity.5levelOther  0.059587779 0.03328956
## Xrace.ethnicity.5levelWhite  0.113165305 0.06004451
## Xinterview_age               0.002146830 0.01911106
## Xdemo_race_hispanic1        -0.008688675 0.02127005
```

1.5 Model: CBCL internalizing factor ~ Pubertal category

Female participants

```
##
## 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)               4.19492    1.89422   2.215 0.026873 *
## pds_p_ss_categoryEarly    1.04585    0.28906   3.618 0.000302 ***
## pds_p_ss_categoryLate     1.70710    0.71494   2.388 0.017023 *
## pds_p_ss_categoryMid      1.20889    0.27421   4.409 1.08e-05 ***
## race.ethnicity.5levelBlack  0.19295  0.79221   0.244 0.807589
## race.ethnicity.5levelMixed  1.90499  0.78883   2.415 0.015805 *
## race.ethnicity.5levelOther  2.49651  0.89969   2.775 0.005562 **
## race.ethnicity.5levelWhite  1.42253  0.74138   1.919 0.055123 .
## interview_age            -0.01158    0.01481  -0.782 0.434254
## demo_race_hispanic1       0.14868    0.31697   0.469 0.639063
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.0143
## lmer.REML =  16394  Scale est. = 13.028    n = 2640


##                              stdcoef       stdse
## X(Intercept)              0.00000000 0.00000000
## Xpds_p_ss_categoryEarly   0.08060431 0.02227793
## Xpds_p_ss_categoryLate    0.04811159 0.02014948
## Xpds_p_ss_categoryMid     0.10804785 0.02450813
## Xrace.ethnicity.5levelBlack  0.01255255 0.05153739
## Xrace.ethnicity.5levelMixed  0.11533323 0.04775786
## Xrace.ethnicity.5levelOther  0.09607645 0.03462406
## Xrace.ethnicity.5levelWhite  0.12275348 0.06397543
## Xinterview_age           -0.01569732 0.02007197
## Xdemo_race_hispanic1      0.01065867 0.02272329
```

Male participants

```
##
## 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)              2.767043   1.792556   1.544  0.12279
## pds_p_ss_categoryEarly   0.686426   0.246874   2.780  0.00546 **
## pds_p_ss_categoryLate    0.398198   1.460564   0.273  0.78516
## pds_p_ss_categoryMid     1.178711   0.495224   2.380  0.01737 *
```

```
## race.ethnicity.5levelBlack 1.455499    0.742891    1.959   0.05018 .
## race.ethnicity.5levelMixed 2.136914    0.743993    2.872   0.00411 **
## race.ethnicity.5levelOther 1.988641    0.852250    2.333   0.01970 *
## race.ethnicity.5levelWhite 1.577340    0.696497    2.265   0.02361 *
## interview_age              0.002858    0.013934    0.205   0.83751
## demo_race_hispanic1        0.226558    0.301163    0.752   0.45195
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.00485
## lmer.REML =  17777  Scale est. = 16.206    n = 2858


##                                   stdcoef      stdse
## X(Intercept)                  0.000000000 0.00000000
## Xpds_p_ss_categoryEarly       0.054041223 0.01943597
## Xpds_p_ss_categoryLate        0.005065386 0.01857952
## Xpds_p_ss_categoryMid         0.046510015 0.01954072
## Xrace.ethnicity.5levelBlack   0.093708659 0.04782920
## Xrace.ethnicity.5levelMixed   0.127004697 0.04421824
## Xrace.ethnicity.5levelOther   0.077672135 0.03328710
## Xrace.ethnicity.5levelWhite   0.135978159 0.06004314
## Xinterview_age                0.003896045 0.01899556
## Xdemo_race_hispanic1          0.016373450 0.02176517
```

1.6 Model: CBCL Anxious-Depressed ~ Pubertal category

Female participants

```
##
## 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)                1.915933   1.067993   1.794  0.07293 .
## pds_p_ss_categoryEarly     0.483184   0.163247   2.960  0.00311 **
## pds_p_ss_categoryLate      0.412744   0.403926   1.022  0.30696
## pds_p_ss_categoryMid       0.404799   0.154202   2.625  0.00871 **
## race.ethnicity.5levelBlack 0.084441   0.442742   0.191  0.84876
## race.ethnicity.5levelMixed 0.937872   0.441088   2.126  0.03357 *
## race.ethnicity.5levelOther 0.990706   0.503685   1.967  0.04930 *
## race.ethnicity.5levelWhite 0.830010   0.414449   2.003  0.04531 *
## interview_age             -0.003648   0.008362  -0.436  0.66271
## demo_race_hispanic1        0.006521   0.176760   0.037  0.97058
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
```

```
## R-sq.(adj) =  0.00866
## lmer.REML =  13371  Scale est. = 4.9568    n = 2640


##                             stdcoef        stdse
## X(Intercept)             0.0000000000 0.00000000
## Xpds_p_ss_categoryEarly    0.0666821146 0.02252895
## Xpds_p_ss_categoryLate     0.0208294600 0.02038447
## Xpds_p_ss_categoryMid      0.0647849179 0.02467878
## Xrace.ethnicity.5levelBlack  0.0098365511 0.05157488
## Xrace.ethnicity.5levelMixed  0.1016743896 0.04781824
## Xrace.ethnicity.5levelOther  0.0682706259 0.03470949
## Xrace.ethnicity.5levelWhite  0.1282513981 0.06403985
## Xinterview_age           -0.0088550958 0.02029912
## Xdemo_race_hispanic1       0.0008370453 0.02269039
```

Male participants

```
##
## 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)                 1.587321   1.001121   1.586  0.11295
## pds_p_ss_categoryEarly      0.436097   0.137806   3.165  0.00157 **
## pds_p_ss_categoryLate       0.345434   0.817588   0.423  0.67269
## pds_p_ss_categoryMid        0.434931   0.275375   1.579  0.11435
## race.ethnicity.5levelBlack  0.660347   0.413811   1.596  0.11065
## race.ethnicity.5levelMixed  1.172055   0.414675   2.826  0.00474 **
## race.ethnicity.5levelOther  1.135594   0.474086   2.395  0.01667 *
## race.ethnicity.5levelWhite  1.069610   0.388310   2.755  0.00592 **
## interview_age              -0.002156   0.007782  -0.277  0.78175
## demo_race_hispanic1         0.087105   0.166704   0.523  0.60135
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.00511
## lmer.REML =  14461  Scale est. = 6.7455    n = 2858


##                             stdcoef        stdse
## X(Intercept)             0.000000000 0.00000000
## Xpds_p_ss_categoryEarly    0.061727178 0.01950572
## Xpds_p_ss_categoryLate     0.007900235 0.01869865
## Xpds_p_ss_categoryMid      0.030854737 0.01953551
## Xrace.ethnicity.5levelBlack  0.076436704 0.04789953
## Xrace.ethnicity.5levelMixed  0.125239875 0.04431002
## Xrace.ethnicity.5levelOther  0.079743217 0.03329108
## Xrace.ethnicity.5levelWhite  0.165779539 0.06018439
```

```
## Xinterview_age                -0.005284360 0.01907259
## Xdemo_race_hispanic1           0.011317928 0.02166042
```

1.7 Model: CBCL Withdrawn-Depressed ~ Pubertal category

Female participants

```
##
## 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)                0.983908   0.554434   1.775  0.07608 .
## pds_p_ss_categoryEarly     0.254666   0.084977   2.997  0.00275 **
## pds_p_ss_categoryLate      0.905884   0.210356   4.306 1.72e-05 ***
## pds_p_ss_categoryMid       0.374417   0.079913   4.685 2.94e-06 ***
## race.ethnicity.5levelBlack 0.180349   0.227835   0.792  0.42868
## race.ethnicity.5levelMixed 0.414586   0.227277   1.824  0.06824 .
## race.ethnicity.5levelOther 0.568592   0.259949   2.187  0.02881 *
## race.ethnicity.5levelWhite 0.236442   0.213381   1.108  0.26793
## interview_age             -0.005017   0.004349  -1.154  0.24877
## demo_race_hispanic1        0.140478   0.090445   1.553  0.12050
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.0172
## lmer.REML =   9927  Scale est. = 1.6132    n = 2640


##                                 stdcoef       stdse
## X(Intercept)                  0.00000000 0.00000000
## Xpds_p_ss_categoryEarly       0.06785245 0.02264112
## Xpds_p_ss_categoryLate        0.08826088 0.02049517
## Xpds_p_ss_categoryMid         0.11568793 0.02469164
## Xrace.ethnicity.5levelBlack   0.04056024 0.05123969
## Xrace.ethnicity.5levelMixed   0.08677235 0.04756868
## Xrace.ethnicity.5levelOther   0.07564646 0.03458409
## Xrace.ethnicity.5levelWhite   0.07053444 0.06365511
## Xinterview_age               -0.02351395 0.02038300
## Xdemo_race_hispanic1          0.03481499 0.02241516
```

Male participants

```
##
## 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)                0.5566494  0.5632536   0.988  0.32310
## pds_p_ss_categoryEarly     0.1324914  0.0780648   1.697  0.08977 .
## pds_p_ss_categoryLate      0.0215316  0.4639320   0.046  0.96299
## pds_p_ss_categoryMid       0.3986271  0.1561815   2.552  0.01075 *
## race.ethnicity.5levelBlack 0.5801070  0.2319830   2.501  0.01245 *
## race.ethnicity.5levelMixed 0.6175353  0.2336669   2.643  0.00827 **
## race.ethnicity.5levelOther 0.4616035  0.2675074   1.726  0.08453 .
## race.ethnicity.5levelWhite 0.3878885  0.2177655   1.781  0.07498 .
## interview_age              0.0002516  0.0043894   0.057  0.95430
## demo_race_hispanic1        0.0228043  0.0893258   0.255  0.79852
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.00564
## lmer.REML =  11228  Scale est. = 2.0873    n = 2858


##                                  stdcoef       stdse
## X(Intercept)                0.0000000000 0.00000000
## Xpds_p_ss_categoryEarly     0.0330987207 0.01950198
## Xpds_p_ss_categoryLate      0.0008691262 0.01872666
## Xpds_p_ss_categoryMid       0.0499112512 0.01955516
## Xrace.ethnicity.5levelBlack 0.1185136478 0.04739325
## Xrace.ethnicity.5levelMixed 0.1164627104 0.04406790
## Xrace.ethnicity.5levelOther 0.0572097864 0.03315408
## Xrace.ethnicity.5levelWhite 0.1061067786 0.05956967
## Xinterview_age              0.0010882377 0.01898707
## Xdemo_race_hispanic1        0.0052296043 0.02048469
```

1.8 Model: CBCL Depressed DSM-5 ~ Pubertal category

Female participants

```
##
## 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)            0.861575   0.644696   1.336  0.18153
## pds_p_ss_categoryEarly 0.256133   0.098889   2.590  0.00965 **
## pds_p_ss_categoryLate  0.731980   0.244492   2.994  0.00278 **
## pds_p_ss_categoryMid   0.380329   0.093369   4.073 4.77e-05 ***
```

```
## race.ethnicity.5levelBlack   0.216245   0.266521   0.811  0.41723
## race.ethnicity.5levelMixed   0.687983   0.266189   2.585  0.00980 **
## race.ethnicity.5levelOther   0.840944   0.304487   2.762  0.00579 **
## race.ethnicity.5levelWhite   0.535046   0.249565   2.144  0.03213 *
## interview_age               -0.004198   0.005054  -0.831  0.40625
## demo_race_hispanic1          0.079854   0.105192   0.759  0.44785
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.0122
## lmer.REML =  10734  Scale est. = 1.7498    n = 2640


##                                  stdcoef      stdse
## X(Intercept)                  0.00000000 0.00000000
## Xpds_p_ss_categoryEarly        0.05824499 0.02248746
## Xpds_p_ss_categoryLate         0.06086848 0.02033099
## Xpds_p_ss_categoryMid          0.10029741 0.02462256
## Xrace.ethnicity.5levelBlack    0.04150767 0.05115809
## Xrace.ethnicity.5levelMixed    0.12289703 0.04755027
## Xrace.ethnicity.5levelOther    0.09548869 0.03457437
## Xrace.ethnicity.5levelWhite    0.13622777 0.06354166
## Xinterview_age                -0.01679345 0.02021751
## Xdemo_race_hispanic1           0.01689074 0.02225046
```

Male participants

```
##
## 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)                  0.665155   0.687317   0.968   0.3332
## pds_p_ss_categoryEarly       0.221676   0.094869   2.337   0.0195 *
## pds_p_ss_categoryLate       -0.071837   0.562670  -0.128   0.8984
## pds_p_ss_categoryMid         0.475409   0.189798   2.505   0.0123 *
## race.ethnicity.5levelBlack   0.499155   0.283856   1.758   0.0788 .
## race.ethnicity.5levelMixed   0.673906   0.284949   2.365   0.0181 *
## race.ethnicity.5levelOther   0.585366   0.326095   1.795   0.0727 .
## race.ethnicity.5levelWhite   0.512173   0.266369   1.923   0.0546 .
## interview_age                0.000953   0.005349   0.178   0.8586
## demo_race_hispanic1         -0.057445   0.112899  -0.509   0.6109
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.00264
## lmer.REML =  12332  Scale est. = 2.9439    n = 2858
```

```
##                             stdcoef       stdse
## X(Intercept)               0.000000000 0.00000000
## Xpds_p_ss_categoryEarly     0.045637063 0.01953107
## Xpds_p_ss_categoryLate     -0.002389617 0.01871698
## Xpds_p_ss_categoryMid       0.049054089 0.01958388
## Xrace.ethnicity.5levelBlack 0.084037199 0.04778974
## Xrace.ethnicity.5levelMixed 0.104737062 0.04428625
## Xrace.ethnicity.5levelOther 0.059786741 0.03330588
## Xrace.ethnicity.5levelWhite 0.115459379 0.06004757
## Xinterview_age              0.003397214 0.01906877
## Xdemo_race_hispanic1       -0.010856270 0.02133635
```

1.9 Model: CBCL internalizing factor ~ Testosterone

Female participants

```
##
## 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)                1.777154   1.897510   0.937  0.34907
## hormone_scr_ert_mean       0.005443   0.007058   0.771  0.44066
## race.ethnicity.5levelBlack 0.356154   0.793854   0.449  0.65373
## race.ethnicity.5levelMixed 1.827132   0.793913   2.301  0.02145 *
## race.ethnicity.5levelOther 2.642245   0.908951   2.907  0.00368 **
## race.ethnicity.5levelWhite 1.441831   0.745211   1.935  0.05313 .
## interview_age              0.013505   0.014891   0.907  0.36452
## demo_race_hispanic1        0.107062   0.326216   0.328  0.74279
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.00669
## lmer.REML =  15258  Scale est. = 13.026    n = 2453


##                             stdcoef       stdse
## X(Intercept)               0.000000000 0.00000000
## Xhormone_scr_ert_mean       0.016033862 0.02079048
## Xrace.ethnicity.5levelBlack 0.022625361 0.05043105
## Xrace.ethnicity.5levelMixed 0.111704497 0.04853712
## Xrace.ethnicity.5levelOther 0.103316708 0.03554169
## Xrace.ethnicity.5levelWhite 0.124259018 0.06422335
## Xinterview_age              0.018455837 0.02034908
## Xdemo_race_hispanic1        0.007687489 0.02342355
```

Male participants

```
##
## 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)               2.168027   1.863328   1.164  0.24472
## hormone_scr_ert_mean      0.002647   0.007279   0.364  0.71610
## race.ethnicity.5levelBlack 1.728885  0.771409   2.241  0.02510 *
## race.ethnicity.5levelMixed 2.136533  0.773964   2.761  0.00581 **
## race.ethnicity.5levelOther 1.852029  0.891676   2.077  0.03790 *
## race.ethnicity.5levelWhite 1.577412  0.724219   2.178  0.02949 *
## interview_age             0.009005   0.014668   0.614  0.53933
## demo_race_hispanic1       0.380427   0.312291   1.218  0.22326
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.00091
## lmer.REML =  16592  Scale est. = 16.744    n = 2652


##                                 stdcoef       stdse
## X(Intercept)               0.000000000 0.00000000
## Xhormone_scr_ert_mean      0.007382955 0.02029885
## Xrace.ethnicity.5levelBlack 0.109172846 0.04871167
## Xrace.ethnicity.5levelMixed 0.126161577 0.04570235
## Xrace.ethnicity.5levelOther 0.070852250 0.03411246
## Xrace.ethnicity.5levelWhite 0.134173075 0.06160131
## Xinterview_age             0.012156013 0.01980087
## Xdemo_race_hispanic1       0.027182278 0.02231384
```

1.10 Model: CBCL Anxious-Depressed ~ Testosterone

Female participants

```
##
## 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)               1.183409   1.072832   1.103   0.2701
## hormone_scr_ert_mean      0.004823   0.003988   1.209   0.2266
```

```
## race.ethnicity.5levelBlack   0.034266   0.445232   0.077   0.9387
## race.ethnicity.5levelMixed   0.857746   0.445476   1.925   0.0543 .
## race.ethnicity.5levelOther   1.034142   0.510581   2.025   0.0429 *
## race.ethnicity.5levelWhite   0.850951   0.418116   2.035   0.0419 *
## interview_age               0.003577   0.008433   0.424   0.6714
## demo_race_hispanic1        -0.027670   0.182744  -0.151   0.8797
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.00676
## lmer.REML =  12461  Scale est. = 4.9188    n = 2453


##                                   stdcoef       stdse
## X(Intercept)                  0.000000000 0.00000000
## Xhormone_scr_ert_mean         0.025295012 0.02091515
## Xrace.ethnicity.5levelBlack   0.003875357 0.05035431
## Xrace.ethnicity.5levelMixed   0.093358200 0.04848619
## Xrace.ethnicity.5levelOther   0.071989735 0.03554307
## Xrace.ethnicity.5levelWhite   0.130560331 0.06415092
## Xinterview_age                0.008703330 0.02051598
## Xdemo_race_hispanic1         -0.003537101 0.02336061
```

Male participants

```
##
## 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)                1.4024752  1.0403825   1.348  0.17776
## hormone_scr_ert_mean      -0.0002916  0.0040592  -0.072  0.94273
## race.ethnicity.5levelBlack 0.8142553  0.4296856   1.895  0.05820 .
## race.ethnicity.5levelMixed 1.1555356  0.4315081   2.678  0.00745 **
## race.ethnicity.5levelOther 1.0604342  0.4960589   2.138  0.03263 *
## race.ethnicity.5levelWhite 1.0359287  0.4038541   2.565  0.01037 *
## interview_age              0.0007301  0.0081858   0.089  0.92893
## demo_race_hispanic1        0.1601077  0.1727342   0.927  0.35406
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.00142
## lmer.REML =  13515  Scale est. = 7.1596    n = 2652


##                                   stdcoef       stdse
## X(Intercept)                  0.000000000 0.00000000
## Xhormone_scr_ert_mean         0.025295012 0.02091515
```

```
## Xrace.ethnicity.5levelBlack  0.003875357 0.05035431
## Xrace.ethnicity.5levelMixed  0.093358200 0.04848619
## Xrace.ethnicity.5levelOther  0.071989735 0.03554307
## Xrace.ethnicity.5levelWhite  0.130560331 0.06415092
## Xinterview_age              0.008703330 0.02051598
## Xdemo_race_hispanic1       -0.003537101 0.02336061
```

1.11 Model: CBCL Withdrawn-Depressed ~ Testosterone

Female participants

```
##
## 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)               0.133412   0.551030   0.242   0.8087
## hormone_scr_ert_mean      0.001354   0.002047   0.661   0.5084
## race.ethnicity.5levelBlack 0.276842  0.226348   1.223   0.2214
## race.ethnicity.5levelMixed 0.433104  0.226779   1.910   0.0563 .
## race.ethnicity.5levelOther 0.595871  0.260391   2.288   0.0222 *
## race.ethnicity.5levelWhite 0.254142  0.212744   1.195   0.2324
## interview_age             0.003477   0.004341   0.801   0.4232
## demo_race_hispanic1       0.143812   0.092509   1.555   0.1202
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.00431
## lmer.REML =   9205  Scale est. = 1.635     n = 2453


##                               stdcoef       stdse
## X(Intercept)               0.00000000 0.00000000
## Xhormone_scr_ert_mean      0.01394301 0.02108262
## Xrace.ethnicity.5levelBlack 0.06147413 0.05026165
## Xrace.ethnicity.5levelMixed 0.09255437 0.04846269
## Xrace.ethnicity.5levelOther 0.08144294 0.03558991
## Xrace.ethnicity.5levelWhite 0.07655856 0.06408774
## Xinterview_age             0.01661007 0.02073628
## Xdemo_race_hispanic1       0.03609479 0.02321844
```

Male participants

```
##
## 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)              0.331248   0.577533   0.574  0.56632
## hormone_scr_ert_mean     0.001538   0.002241   0.687  0.49242
## race.ethnicity.5levelBlack 0.679218 0.237426   2.861  0.00426 **
## race.ethnicity.5levelMixed 0.653437 0.239841   2.724  0.00648 **
## race.ethnicity.5levelOther 0.449377 0.276047   1.628  0.10366
## race.ethnicity.5levelWhite 0.415258 0.223362   1.859  0.06312 .
## interview_age            0.001877   0.004557   0.412  0.68038
## demo_race_hispanic1      0.062563   0.091277   0.685  0.49314
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.00368
## lmer.REML =  10444  Scale est. = 2.2519    n = 2652


##                               stdcoef      stdse
## X(Intercept)              0.000000000 0.00000000
## Xhormone_scr_ert_mean     0.013785987 0.02008000
## Xrace.ethnicity.5levelBlack 0.137824656 0.04817762
## Xrace.ethnicity.5levelMixed 0.123991081 0.04551025
## Xrace.ethnicity.5levelOther 0.055244113 0.03393572
## Xrace.ethnicity.5levelWhite 0.113503077 0.06105175
## Xinterview_age            0.008144147 0.01976814
## Xdemo_race_hispanic1      0.014364780 0.02095773
```

1.12 Model: CBCL Depressed DSM-5 ~ Testosterone

Female participants

```
##
## 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)              0.062803   0.644415   0.097  0.92237
## hormone_scr_ert_mean     0.001558   0.002399   0.650  0.51607
## race.ethnicity.5levelBlack 0.289625 0.265904   1.089  0.27617
## race.ethnicity.5levelMixed 0.689545 0.267077   2.582  0.00989 **
## race.ethnicity.5levelOther 0.886527 0.306968   2.888  0.00391 **
## race.ethnicity.5levelWhite 0.552485 0.249976   2.210  0.02719 *
## interview_age            0.003890   0.005076   0.766  0.44361
## demo_race_hispanic1      0.066325   0.107696   0.616  0.53805
```

```
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.00535
## lmer.REML =   9990  Scale est. = 1.7521    n = 2453


##                                 stdcoef        stdse
## X(Intercept)                 0.00000000 0.00000000
## Xhormone_scr_ert_mean        0.01354995 0.02086202
## Xrace.ethnicity.5levelBlack  0.05432347 0.04987408
## Xrace.ethnicity.5levelMixed  0.12446769 0.04820919
## Xrace.ethnicity.5levelOther  0.10234885 0.03543918
## Xrace.ethnicity.5levelWhite  0.14058123 0.06360714
## Xinterview_age               0.01569345 0.02048120
## Xdemo_race_hispanic1         0.01406111 0.02283175
```

Male participants

```
##
## 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)               0.4492781  0.7138023   0.629   0.5291
## hormone_scr_ert_mean      0.0006326  0.0027819   0.227   0.8201
## race.ethnicity.5levelBlack 0.5974881  0.2944216   2.029   0.0425 *
## race.ethnicity.5levelMixed 0.7062815  0.2963015   2.384   0.0172 *
## race.ethnicity.5levelOther 0.5316090  0.3411263   1.558   0.1193
## race.ethnicity.5levelWhite 0.5137144  0.2767329   1.856   0.0635 .
## interview_age             0.0032500  0.0056258   0.578   0.5635
## demo_race_hispanic1      -0.0160044  0.1167685  -0.137   0.8910
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  -0.000243
## lmer.REML =  11535  Scale est. = 2.9569    n = 2652


##                                  stdcoef         stdse
## X(Intercept)                 0.000000000 0.00000000
## Xhormone_scr_ert_mean        0.004609412 0.02027014
## Xrace.ethnicity.5levelBlack  0.098575746 0.04857473
## Xrace.ethnicity.5levelMixed  0.108965168 0.04571342
## Xrace.ethnicity.5levelOther  0.053136195 0.03409678
## Xrace.ethnicity.5levelWhite  0.114165318 0.06149973
## Xinterview_age               0.011462798 0.01984231
## Xdemo_race_hispanic1        -0.002987764 0.02179879
```

1.13 Model: CBCL internalizing factor ~ Testosterone + PDS

Female participants

```
##
## 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)                2.5126736  1.9039529   1.320 0.187054
## hormone_scr_ert_mean      -0.0007324  0.0072485  -0.101 0.919525
## PDS_score                  0.6083923  0.1697666   3.584 0.000345 ***
## race.ethnicity.5levelBlack -0.0375505  0.7994683  -0.047 0.962542
## race.ethnicity.5levelMixed  1.6444446  0.7935891   2.072 0.038355 *
## race.ethnicity.5levelOther  2.4066014  0.9091006   2.647 0.008167 **
## race.ethnicity.5levelWhite  1.3496082  0.7437925   1.814 0.069724 .
## interview_age              0.0018428  0.0152063   0.121 0.903555
## demo_race_hispanic1        0.0937585  0.3253881   0.288 0.773261
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.011
## lmer.REML =  15247  Scale est. = 12.976    n = 2453
```

```
##                              stdcoef       stdse
## X(Intercept)              0.000000000 0.00000000
## Xhormone_scr_ert_mean    -0.002157532 0.02135282
## XPDS_score                0.079996978 0.02232246
## Xrace.ethnicity.5levelBlack -0.002385464 0.05078772
## Xrace.ethnicity.5levelMixed  0.100535650 0.04851729
## Xrace.ethnicity.5levelOther  0.094102604 0.03554753
## Xrace.ethnicity.5levelWhite  0.116311148 0.06410109
## Xinterview_age            0.002518249 0.02078038
## Xdemo_race_hispanic1      0.006732210 0.02336409
```

Male participants

```
##
## 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)                       2.3451907  1.8572537   1.263  0.20680
## hormone_scr_ert_mean             -0.0008829  0.0072966  -0.121  0.90370
## PDS_score                         0.9487371  0.2115320   4.485  7.6e-06 ***
## race.ethnicity.5levelBlack        1.3599716  0.7732091   1.759  0.07872 .
## race.ethnicity.5levelMixed        2.0453733  0.7715514   2.651  0.00807 **
## race.ethnicity.5levelOther        1.7245525  0.8890914   1.940  0.05252 .
## race.ethnicity.5levelWhite        1.5405067  0.7218054   2.134  0.03291 *
## interview_age                    -0.0014188  0.0148020  -0.096  0.92365
## demo_race_hispanic1               0.3030948  0.3119631   0.972  0.33135
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.00748
## lmer.REML =  16573  Scale est. = 16.48     n = 2652


##                                   stdcoef       stdse
## X(Intercept)                  0.000000000 0.00000000
## Xhormone_scr_ert_mean        -0.002462288 0.02034893
## XPDS_score                    0.092461287 0.02061532
## Xrace.ethnicity.5levelBlack   0.085877291 0.04882536
## Xrace.ethnicity.5levelMixed   0.120778635 0.04555986
## Xrace.ethnicity.5levelOther   0.065975436 0.03401357
## Xrace.ethnicity.5levelWhite   0.131033922 0.06139603
## Xinterview_age               -0.001915276 0.01998195
## Xdemo_race_hispanic1          0.021656733 0.02229039
```

1.14 Model: CBCL internalizing factor ~ Testosterone + Pubertal category

Female participants

```
##
## 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)                3.1911880  1.9388316   1.646  0.09991 .
## hormone_scr_ert_mean       0.0004012  0.0071781   0.056  0.95543
## pds_p_ss_categoryEarly     0.9264288  0.2982685   3.106  0.00192 **
## pds_p_ss_categoryLate      1.0992131  0.7741539   1.420  0.15577
## pds_p_ss_categoryMid       1.2225403  0.2890843   4.229  2.43e-05 ***
## race.ethnicity.5levelBlack 0.0056281  0.7994747   0.007  0.99438
## race.ethnicity.5levelMixed 1.6934486  0.7931990   2.135  0.03286 *
## race.ethnicity.5levelOther 2.4769969  0.9078018   2.729  0.00641 **
## race.ethnicity.5levelWhite 1.4036386  0.7433801   1.888  0.05912 .
## interview_age             -0.0024913  0.0154099  -0.162  0.87158
## demo_race_hispanic1        0.0477434  0.3264159   0.146  0.88372
## ---
```

```
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.0123
## lmer.REML =  15239  Scale est. = 12.821    n = 2453


##                                  stdcoef      stdse
## X(Intercept)               0.0000000000 0.00000000
## Xhormone_scr_ert_mean      0.0011818672 0.02114545
## Xpds_p_ss_categoryEarly    0.0720675070 0.02320251
## Xpds_p_ss_categoryLate     0.0296449313 0.02087833
## Xpds_p_ss_categoryMid      0.1091599094 0.02581217
## Xrace.ethnicity.5levelBlack 0.0003575324 0.05078812
## Xrace.ethnicity.5levelMixed 0.1035315893 0.04849344
## Xrace.ethnicity.5levelOther 0.0968551970 0.03549674
## Xrace.ethnicity.5levelWhite 0.1209675645 0.06406555
## Xinterview_age             -0.0034045374 0.02105865
## Xdemo_race_hispanic1        0.0034281562 0.02343789
```

Male participants

```
##
## 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)             2.9749057  1.8733829   1.588  0.11241
## hormone_scr_ert_mean    0.0006428  0.0072887   0.088  0.92973
## pds_p_ss_categoryEarly  0.8149789  0.2601042   3.133  0.00175 **
## pds_p_ss_categoryLate   0.8421277  1.5964505   0.528  0.59789
## pds_p_ss_categoryMid    1.2759293  0.5248178   2.431  0.01512 *
## race.ethnicity.5levelBlack 1.4311786  0.7750105   1.847  0.06491 .
## race.ethnicity.5levelMixed 2.0908969  0.7728241   2.706  0.00686 **
## race.ethnicity.5levelOther 1.7855890  0.8908639   2.004  0.04514 *
## race.ethnicity.5levelWhite 1.5842816  0.7229125   2.192  0.02850 *
## interview_age           0.0010580  0.0148078   0.071  0.94305
## demo_race_hispanic1     0.2736542  0.3133001   0.873  0.38249
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.00488
## lmer.REML =  16576  Scale est. = 16.783    n = 2652


##                                  stdcoef      stdse
## X(Intercept)               0.000000000 0.00000000
## Xhormone_scr_ert_mean      0.001792595 0.02032693
## Xpds_p_ss_categoryEarly    0.063335416 0.02021378
```

```
## Xpds_p_ss_categoryLate      0.010164229 0.01926868
## Xpds_p_ss_categoryMid       0.049542135 0.02037777
## Xrace.ethnicity.5levelBlack 0.090373759 0.04893911
## Xrace.ethnicity.5levelMixed 0.123466791 0.04563501
## Xrace.ethnicity.5levelOther 0.068310481 0.03408138
## Xrace.ethnicity.5levelWhite 0.134757373 0.06149020
## Xinterview_age             0.001428227 0.01998972
## Xdemo_race_hispanic1        0.019553147 0.02238593
```

1.15 Model: CBCL Anxious-Depressed ~ Testosterone + PDS

Female participants

```
##
## 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)                1.3963972  1.0785158   1.295   0.1955
## hormone_scr_ert_mean       0.0030115  0.0041066   0.733   0.4634
## PDS_score                  0.1760253  0.0959901   1.834   0.0668 .
## race.ethnicity.5levelBlack -0.0801965  0.4493329  -0.178   0.8584
## race.ethnicity.5levelMixed  0.8045575  0.4461652   1.803   0.0715 .
## race.ethnicity.5levelOther  0.9650993  0.5116810   1.886   0.0594 .
## race.ethnicity.5levelWhite  0.8238669  0.4181297   1.970   0.0489 *
## interview_age              0.0002133  0.0086250   0.025   0.9803
## demo_race_hispanic1        -0.0314620  0.1826377  -0.172   0.8632
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.0077
## lmer.REML =  12460  Scale est. = 4.9271    n = 2453


##                                stdcoef      stdse
## X(Intercept)                0.0000000000 0.00000000
## Xhormone_scr_ert_mean       0.0157934393 0.02153673
## XPDS_score                  0.0412057495 0.02247032
## Xrace.ethnicity.5levelBlack -0.0090699635 0.05081812
## Xrace.ethnicity.5levelMixed  0.0875690910 0.04856120
## Xrace.ethnicity.5levelOther  0.0671834638 0.03561965
## Xrace.ethnicity.5levelWhite  0.1264048082 0.06415309
## Xinterview_age              0.0005188738 0.02098374
## Xdemo_race_hispanic1        -0.0040218594 0.02334697
```

Male participants

```
##
```

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```
## 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)                  1.497129   1.037898   1.442   0.1493
## hormone_scr_ert_mean        -0.002080   0.004073  -0.511   0.6095
## PDS_score                    0.479249   0.117988   4.062 5.01e-05 ***
## race.ethnicity.5levelBlack   0.626727   0.431078   1.454   0.1461
## race.ethnicity.5levelMixed   1.107872   0.430497   2.573   0.0101 *
## race.ethnicity.5levelOther   0.996589   0.494971   2.013   0.0442 *
## race.ethnicity.5levelWhite   1.015814   0.402838   2.522   0.0117 *
## interview_age               -0.004572   0.008268  -0.553   0.5803
## demo_race_hispanic1          0.121678   0.172790   0.704   0.4814
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.00668
## lmer.REML =  13501  Scale est. = 7.0696    n = 2652


##                                  stdcoef        stdse
## X(Intercept)                  0.00000000 0.00000000
## Xhormone_scr_ert_mean        -0.01042667 0.02041314
## XPDS_score                    0.08393690 0.02066466
## Xrace.ethnicity.5levelBlack   0.07112205 0.04891942
## Xrace.ethnicity.5levelMixed   0.11756669 0.04568408
## Xrace.ethnicity.5levelOther   0.06851717 0.03403004
## Xrace.ethnicity.5levelWhite   0.15527869 0.06157837
## Xinterview_age               -0.01109268 0.02005929
## Xdemo_race_hispanic1          0.01562436 0.02218760
```

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

Female participants

```
##
## 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)                  1.508191   1.098965   1.372  0.17007
## hormone_scr_ert_mean         0.003622   0.004068   0.890  0.37332
## pds_p_ss_categoryEarly       0.453347   0.169177   2.680  0.00742 **
```

```
## pds_p_ss_categoryLate      0.098787    0.440211    0.224  0.82246
## pds_p_ss_categoryMid       0.398897    0.163385    2.441  0.01470 *
## race.ethnicity.5levelBlack -0.039410   0.449379   -0.088  0.93012
## race.ethnicity.5levelMixed  0.832990   0.445977    1.868  0.06191 .
## race.ethnicity.5levelOther  0.999761   0.510972    1.957  0.05051 .
## race.ethnicity.5levelWhite  0.849123   0.417941    2.032  0.04229 *
## interview_age             -0.001035    0.008746   -0.118  0.90579
## demo_race_hispanic1       -0.040163    0.183275   -0.219  0.82656
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.00886
## lmer.REML =  12456  Scale est. = 4.8884    n = 2453


##                                  stdcoef       stdse
## X(Intercept)                 0.000000000 0.00000000
## Xhormone_scr_ert_mean        0.018994922 0.02133217
## Xpds_p_ss_categoryEarly      0.062784333 0.02342944
## Xpds_p_ss_categoryLate       0.004743106 0.02113600
## Xpds_p_ss_categoryMid        0.063409386 0.02597197
## Xrace.ethnicity.5levelBlack -0.004457115 0.05082334
## Xrace.ethnicity.5levelMixed  0.090663707 0.04854067
## Xrace.ethnicity.5levelOther  0.069596400 0.03557028
## Xrace.ethnicity.5levelWhite  0.130279855 0.06412419
## Xinterview_age              -0.002518605 0.02127777
## Xdemo_race_hispanic1        -0.005134106 0.02342844
```

Male participants

```
##
## 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)                 1.825949   1.046289   1.745 0.081072 .
## hormone_scr_ert_mean       -0.001268   0.004067  -0.312 0.755199
## pds_p_ss_categoryEarly      0.481718   0.145292   3.316 0.000927 ***
## pds_p_ss_categoryLate       0.592866   0.895264   0.662 0.507885
## pds_p_ss_categoryMid        0.488618   0.291851   1.674 0.094209 .
## race.ethnicity.5levelBlack  0.670789   0.431935   1.553 0.120547
## race.ethnicity.5levelMixed  1.139258   0.431021   2.643 0.008262 **
## race.ethnicity.5levelOther  1.042163   0.495761   2.102 0.035635 *
## race.ethnicity.5levelWhite  1.043333   0.403309   2.587 0.009736 **
## interview_age              -0.003563   0.008265  -0.431 0.666403
## demo_race_hispanic1         0.106431   0.173561   0.613 0.539781
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

```
##
##
## R-sq.(adj) =  0.00466
## lmer.REML =  13503  Scale est. = 7.1605    n = 2652


##                                 stdcoef       stdse
## X(Intercept)                0.000000000 0.00000000
## Xhormone_scr_ert_mean      -0.006355775 0.02038255
## Xpds_p_ss_categoryEarly     0.067277648 0.02029174
## Xpds_p_ss_categoryLate      0.012859676 0.01941892
## Xpds_p_ss_categoryMid       0.034095326 0.02036512
## Xrace.ethnicity.5levelBlack 0.076122288 0.04901677
## Xrace.ethnicity.5levelMixed 0.120897416 0.04573972
## Xrace.ethnicity.5levelOther 0.071650404 0.03408441
## Xrace.ethnicity.5levelWhite 0.159485135 0.06165033
## Xinterview_age             -0.008644950 0.02005147
## Xdemo_race_hispanic1        0.013666637 0.02228655
```

1.17 Model: CBCL Withdrawn-Depressed ~ Testosterone + PDS

Female participants

```
##
## 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)                 3.556e-01  5.525e-01   0.644 0.519837
## hormone_scr_ert_mean       -5.752e-04  2.105e-03  -0.273 0.784659
## PDS_score                   1.833e-01  4.913e-02   3.731 0.000195 ***
## race.ethnicity.5levelBlack  1.587e-01  2.279e-01   0.696 0.486274
## race.ethnicity.5levelMixed  3.788e-01  2.266e-01   1.672 0.094735 .
## race.ethnicity.5levelOther  5.243e-01  2.604e-01   2.013 0.044193 *
## race.ethnicity.5levelWhite  2.268e-01  2.122e-01   1.069 0.285173
## interview_age              -1.613e-05  4.427e-03  -0.004 0.997094
## demo_race_hispanic1         1.384e-01  9.207e-02   1.503 0.132878
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.00942
## lmer.REML = 9195.4  Scale est. = 1.6114    n = 2453


##                                  stdcoef       stdse
## X(Intercept)                0.000000e+00 0.00000000
## Xhormone_scr_ert_mean      -5.922691e-03 0.02167236
## XPDS_score                  8.424189e-02 0.02257935
## Xrace.ethnicity.5levelBlack 3.523631e-02 0.05060126
```

```
## Xrace.ethnicity.5levelMixed  8.093960e-02 0.04842092
## Xrace.ethnicity.5levelOther  7.165441e-02 0.03559062
## Xrace.ethnicity.5levelWhite  6.832264e-02 0.06391230
## Xinterview_age              -7.702846e-05 0.02114834
## Xdemo_race_hispanic1         3.473852e-02 0.02310743
```

Male participants

```
##
## 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)               0.3813731  0.5765246   0.662 0.508347
## hormone_scr_ert_mean      0.0006791  0.0022506   0.302 0.762869
## PDS_score                 0.2179998  0.0659193   3.307 0.000955 ***
## race.ethnicity.5levelBlack 0.5884738  0.2385225   2.467 0.013682 *
## race.ethnicity.5levelMixed 0.6306338  0.2394544   2.634 0.008497 **
## race.ethnicity.5levelOther 0.4223634  0.2756136   1.532 0.125532
## race.ethnicity.5levelWhite 0.4071157  0.2228930   1.827 0.067887 .
## interview_age            -0.0005648  0.0046067  -0.123 0.902435
## demo_race_hispanic1       0.0415761  0.0911750   0.456 0.648425
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.00738
## lmer.REML =  10437  Scale est. = 2.241     n = 2652
```

```
##                              stdcoef      stdse
## X(Intercept)             0.000000000 0.00000000
## Xhormone_scr_ert_mean    0.006086061 0.02016943
## XPDS_score               0.068271449 0.02064408
## Xrace.ethnicity.5levelBlack 0.119411099 0.04840018
## Xrace.ethnicity.5levelMixed 0.119664092 0.04543697
## Xrace.ethnicity.5levelOther 0.051923159 0.03388250
## Xrace.ethnicity.5levelWhite 0.111277406 0.06092360
## Xinterview_age          -0.002449971 0.01998377
## Xdemo_race_hispanic1     0.009546123 0.02093434
```

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

Female participants

```
##
## 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)                0.686454   0.562795   1.220  0.22269
## hormone_scr_ert_mean      -0.000543   0.002084  -0.261  0.79440
## pds_p_ss_categoryEarly     0.223344   0.086901   2.570  0.01023 *
## pds_p_ss_categoryLate      0.686797   0.226687   3.030  0.00247 **
## pds_p_ss_categoryMid       0.353466   0.083518   4.232  2.4e-05 ***
## race.ethnicity.5levelBlack 0.155767   0.227619   0.684  0.49383
## race.ethnicity.5levelMixed 0.389973   0.226276   1.723  0.08494 .
## race.ethnicity.5levelOther 0.529753   0.259864   2.039  0.04160 *
## race.ethnicity.5levelWhite 0.241722   0.211807   1.141  0.25388
## interview_age             -0.002133   0.004488  -0.475  0.63468
## demo_race_hispanic1        0.112749   0.092161   1.223  0.22130
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
## 
## 
## R-sq.(adj) =  0.0118
## lmer.REML = 9191.5  Scale est. = 1.5977    n = 2453


##                                stdcoef        stdse
## X(Intercept)                0.000000000 0.00000000
## Xhormone_scr_ert_mean      -0.005591769 0.02145476
## Xpds_p_ss_categoryEarly     0.060730167 0.02362957
## Xpds_p_ss_categoryLate      0.064744089 0.02136966
## Xpds_p_ss_categoryMid       0.110319132 0.02606658
## Xrace.ethnicity.5levelBlack 0.034588750 0.05054392
## Xrace.ethnicity.5levelMixed 0.083337296 0.04835525
## Xrace.ethnicity.5levelOther 0.072405969 0.03551784
## Xrace.ethnicity.5levelWhite 0.072816912 0.06380542
## Xinterview_age             -0.010188454 0.02144014
## Xdemo_race_hispanic1        0.028298439 0.02313107
```

Male participants

```
## 
## 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)             5.246e-01  5.809e-01   0.903  0.36652
## hormone_scr_ert_mean    9.586e-04  2.245e-03   0.427  0.66947
## pds_p_ss_categoryEarly  1.529e-01  8.126e-02   1.881  0.06007 .
```

```
## pds_p_ss_categoryLate      5.583e-02  5.016e-01   0.111  0.91140
## pds_p_ss_categoryMid       4.621e-01  1.634e-01   2.828  0.00472 **
## race.ethnicity.5levelBlack 5.906e-01  2.389e-01   2.472  0.01348 *
## race.ethnicity.5levelMixed 6.337e-01  2.396e-01   2.645  0.00822 **
## race.ethnicity.5levelOther 4.214e-01  2.759e-01   1.527  0.12678
## race.ethnicity.5levelWhite 4.131e-01  2.230e-01   1.852  0.06411 .
## interview_age              9.875e-05  4.601e-03   0.021  0.98288
## demo_race_hispanic1        3.266e-02  9.160e-02   0.357  0.72147
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.00644
## lmer.REML =  10439  Scale est. = 2.2584    n = 2652


##                                 stdcoef       stdse
## X(Intercept)               0.000000000 0.00000000
## Xhormone_scr_ert_mean      0.008590475 0.02012184
## Xpds_p_ss_categoryEarly    0.038174544 0.02029359
## Xpds_p_ss_categoryLate     0.002165214 0.01945589
## Xpds_p_ss_categoryMid      0.057659874 0.02038876
## Xrace.ethnicity.5levelBlack 0.119844034 0.04847202
## Xrace.ethnicity.5levelMixed 0.120247211 0.04546629
## Xrace.ethnicity.5levelOther 0.051808973 0.03391988
## Xrace.ethnicity.5levelWhite 0.112914322 0.06096314
## Xinterview_age             0.000428364 0.01996110
## Xdemo_race_hispanic1       0.007498653 0.02103253
```

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

Female participants

```
##
## 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)                0.2843730  0.6470054   0.440  0.66032
## hormone_scr_ert_mean      -0.0003191  0.0024663  -0.129  0.89707
## PDS_score                  0.1832904  0.0577771   3.172  0.00153 **
## race.ethnicity.5levelBlack 0.1673917  0.2681722   0.624  0.53256
## race.ethnicity.5levelMixed 0.6327813  0.2671638   2.369  0.01794 *
## race.ethnicity.5levelOther 0.8149754  0.3072112   2.653  0.00803 **
## race.ethnicity.5levelWhite 0.5234749  0.2496598   2.097  0.03612 *
## interview_age              0.0003987  0.0051849   0.077  0.93870
## demo_race_hispanic1        0.0621108  0.1074870   0.578  0.56342
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

```
## 
## 
## R-sq.(adj) =  0.00875
## lmer.REML = 9983.8  Scale est. = 1.7485    n = 2453

##                              stdcoef        stdse
## X(Intercept)                0.000000000 0.00000000
## Xhormone_scr_ert_mean      -0.002775311 0.02145079
## XPDS_score                  0.071157860 0.02243049
## Xrace.ethnicity.5levelBlack 0.031396751 0.05029959
## Xrace.ethnicity.5levelMixed 0.114221486 0.04822494
## Xrace.ethnicity.5levelOther 0.094088220 0.03546727
## Xrace.ethnicity.5levelWhite 0.133199563 0.06352658
## Xinterview_age              0.001608878 0.02092015
## Xdemo_race_hispanic1        0.013167622 0.02278749
```

Male participants

```
## 
## 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)                 0.5022092  0.7127872   0.705 0.481139
## hormone_scr_ert_mean       -0.0003917  0.0027948  -0.140 0.888539
## PDS_score                   0.2692402  0.0812926   3.312 0.000939 ***
## race.ethnicity.5levelBlack  0.4894299  0.2957564   1.655 0.098075 .
## race.ethnicity.5levelMixed  0.6791623  0.2959022   2.295 0.021798 *
## race.ethnicity.5levelOther  0.4962040  0.3406952   1.456 0.145388
## race.ethnicity.5levelWhite  0.5028240  0.2763059   1.820 0.068901 .
## interview_age               0.0002839  0.0056878   0.050 0.960197
## demo_race_hispanic1        -0.0382889  0.1169102  -0.328 0.743311
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
## 
## 
## R-sq.(adj) =  0.00332
## lmer.REML =  11527  Scale est. = 2.9467    n = 2652

##                              stdcoef        stdse
## X(Intercept)                0.000000000 0.00000000
## Xhormone_scr_ert_mean      -0.002854321 0.02036382
## XPDS_score                  0.068556120 0.02069938
## Xrace.ethnicity.5levelBlack 0.080747911 0.04879496
## Xrace.ethnicity.5levelMixed 0.104781214 0.04565181
## Xrace.ethnicity.5levelOther 0.049597343 0.03405369
## Xrace.ethnicity.5levelWhite 0.111745086 0.06140483
## Xinterview_age              0.001001269 0.02006110
## Xdemo_race_hispanic1       -0.007147910 0.02182525
```

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

Female participants

```
##
## 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)                0.5842775  0.6591968   0.886  0.37552
## hormone_scr_ert_mean      -0.0002682  0.0024428  -0.110  0.91259
## pds_p_ss_categoryEarly     0.2207987  0.1019876   2.165  0.03049 *
## pds_p_ss_categoryLate      0.4844084  0.2650177   1.828  0.06770 .
## pds_p_ss_categoryMid       0.3871347  0.0983396   3.937 8.49e-05 ***
## race.ethnicity.5levelBlack 0.1527621  0.2682545   0.569  0.56909
## race.ethnicity.5levelMixed 0.6344235  0.2670693   2.376  0.01760 *
## race.ethnicity.5levelOther 0.8202047  0.3068257   2.673  0.00756 **
## race.ethnicity.5levelWhite 0.5327023  0.2495551   2.135  0.03289 *
## interview_age             -0.0015013  0.0052556  -0.286  0.77516
## demo_race_hispanic1        0.0432026  0.1078722   0.400  0.68882
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.0101
## lmer.REML = 9980.8  Scale est. = 1.7325    n = 2453


##                                stdcoef        stdse
## X(Intercept)                0.000000000 0.00000000
## Xhormone_scr_ert_mean      -0.002332619 0.02124622
## Xpds_p_ss_categoryEarly     0.050712757 0.02342438
## Xpds_p_ss_categoryLate      0.038572117 0.02110263
## Xpds_p_ss_categoryMid       0.102059963 0.02592519
## Xrace.ethnicity.5levelBlack 0.028652756 0.05031503
## Xrace.ethnicity.5levelMixed 0.114517906 0.04820789
## Xrace.ethnicity.5levelOther 0.094691946 0.03542276
## Xrace.ethnicity.5levelWhite 0.135547491 0.06349994
## Xinterview_age             -0.006057651 0.02120532
## Xdemo_race_hispanic1        0.009159043 0.02286914
```

Male participants

```
##
## 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)                 7.141e-01  7.180e-01   0.995  0.32002
## hormone_scr_ert_mean       -8.151e-05  2.788e-03  -0.029  0.97668
## pds_p_ss_categoryEarly      2.553e-01  1.000e-01   2.553  0.01073 *
## pds_p_ss_categoryLate       6.151e-02  6.153e-01   0.100  0.92038
## pds_p_ss_categoryMid        5.296e-01  2.013e-01   2.631  0.00857 **
## race.ethnicity.5levelBlack  4.867e-01  2.961e-01   1.644  0.10036
## race.ethnicity.5levelMixed  6.851e-01  2.960e-01   2.314  0.02073 *
## race.ethnicity.5levelOther  5.019e-01  3.410e-01   1.472  0.14115
## race.ethnicity.5levelWhite  5.134e-01  2.764e-01   1.857  0.06336 .
## interview_age               6.888e-04  5.681e-03   0.121  0.90351
## demo_race_hispanic1        -5.283e-02  1.173e-01  -0.450  0.65253
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.00271
## lmer.REML =  11527  Scale est. = 2.9327    n = 2652


##                                 stdcoef        stdse
## X(Intercept)               0.0000000000 0.00000000
## Xhormone_scr_ert_mean     -0.0005939289 0.02031284
## Xpds_p_ss_categoryEarly    0.0518430407 0.02030465
## Xpds_p_ss_categoryLate     0.0019396794 0.01940460
## Xpds_p_ss_categoryMid      0.0537311462 0.02042575
## Xrace.ethnicity.5levelBlack  0.0802963150 0.04885085
## Xrace.ethnicity.5levelMixed  0.1056953198 0.04566977
## Xrace.ethnicity.5levelOther  0.0501713136 0.03408466
## Xrace.ethnicity.5levelWhite  0.1140845195 0.06142144
## Xinterview_age             0.0024294941 0.02003812
## Xdemo_race_hispanic1      -0.0098629123 0.02190270
```

2—Reward~Puberty—

2.1 Model: BIS-BAS-RR ~ PDS

Female participants

```
##
## 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)  0.395325   0.306068   1.292  0.19660
## PDS_score    0.074583   0.027051   2.757  0.00587 **
```

```
## interview_age -0.004766    0.002627   -1.814   0.06972 .
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.00449
## lmer.REML = 7545.1  Scale est. = 0.7525    n = 2690


##                    stdcoef       stdse
## X(Intercept)    0.00000000 0.00000000
## XPDS_score      0.05558130 0.02015902
## Xinterview_age -0.03622943 0.01996716
```

Male participants

```
##
## 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)    0.171405   0.289344   0.592  0.55363
## PDS_score      0.091570   0.033981   2.695  0.00708 **
## interview_age -0.001888   0.002449  -0.771  0.44078
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.0027
## lmer.REML = 8055.6  Scale est. = 0.73985   n = 2908


##                    stdcoef       stdse
## X(Intercept)    0.00000000 0.00000000
## XPDS_score      0.05135684 0.01905805
## Xinterview_age -0.01459209 0.01892679
```

2.2 Model : Reaction Time ~ PDS

Female participants

```
##
## 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)    -0.572358    0.316549   -1.808    0.0707 .
## PDS_score       -0.020889    0.028535   -0.732    0.4642
## interview_age    0.005457    0.002728    2.000    0.0456 *
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.00104
## lmer.REML =    5938  Scale est. = 0.67938   n = 2201


##                  stdcoef       stdse
## X(Intercept)     0.00000000 0.00000000
## XPDS_score       -0.01620865 0.02214117
## Xinterview_age   0.04407552 0.02203886


##
## 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)    -0.349121   0.318183   -1.097    0.273
## PDS_score       -0.026958   0.028604   -0.942    0.346
## interview_age    0.003428   0.002742    1.250    0.211
##
##
## R-sq.(adj) =  0.000134
## lmer.REML = 5963.2  Scale est. = 0.77188    n = 2201


##                  stdcoef       stdse
## X(Intercept)     0.00000000 0.00000000
## XPDS_score       -0.02082256 0.02209392
## Xinterview_age   0.02756625 0.02204520
```

Male participants

```
##
## 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)     0.1111430 0.2929755    0.379    0.7045
## PDS_score       -0.0632857 0.0355353   -1.781    0.0751 .
## interview_age  -0.0003222 0.0024828   -0.130    0.8968
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

```
## 
## 
## R-sq.(adj) =  0.000741
## lmer.REML = 5939.1  Scale est. = 0.71204   n = 2297


##                   stdcoef        stdse
## X(Intercept)    0.000000000 0.00000000
## XPDS_score     -0.037980395 0.02132623
## Xinterview_age -0.002759926 0.02126704


## 
## 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)   0.0232816  0.2965386   0.079    0.937
## PDS_score    -0.0239408  0.0358885  -0.667    0.505
## interview_age 0.0001343  0.0025139   0.053    0.957
## 
## 
## R-sq.(adj) =  -0.000678
## lmer.REML =   6016  Scale est. = 0.79698   n = 2297


##                   stdcoef        stdse
## X(Intercept)    0.000000000 0.00000000
## XPDS_score     -0.014143995 0.02120258
## Xinterview_age  0.001132671 0.02119757
```

2.3 Model: Caudate Anticipation ~ PDS

Female participants

```
## 
## Family: gaussian
## Link function: identity
## 
## Formula:
## caudate_rvsn_ant_z ~ PDS_score + interview_age
## 
## Parametric coefficients:
##                Estimate Std. Error t value Pr(>|t|)
## (Intercept)   -0.483420   0.318838  -1.516   0.1296
## PDS_score     -0.049471   0.028595  -1.730   0.0838 .
## interview_age  0.004869   0.002743   1.775   0.0760 .
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
## 
## 
```

```
## R-sq.(adj) =  0.00193
## lmer.REML = 5350.3  Scale est. = 0.77536   n = 2044
```

```
##                     stdcoef        stdse
## X(Intercept)     0.00000000 0.00000000
## XPDS_score      -0.03986291 0.02304081
## Xinterview_age   0.04069642 0.02292625
```

Male participants

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## caudate_rvsn_ant_z ~ PDS_score + interview_age
##
## Parametric coefficients:
##               Estimate Std. Error t value Pr(>|t|)
## (Intercept)  -0.186131   0.341694  -0.545    0.586
## PDS_score    -0.008219   0.041635  -0.197    0.844
## interview_age 0.001612   0.002897   0.556    0.578
##
##
## R-sq.(adj) =  -0.000776
## lmer.REML = 5730.1  Scale est. = 0.78555   n = 2060
```

```
##                      stdcoef        stdse
## X(Intercept)     0.000000000 0.00000000
## XPDS_score      -0.004462425 0.02260454
## Xinterview_age   0.012518023 0.02249980
```

2.4 Model B: Putamen Anticipation ~ PDS

Female participants

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## putamen_rvsn_ant_z ~ PDS_score + interview_age
##
## Parametric coefficients:
##               Estimate Std. Error t value Pr(>|t|)
## (Intercept)  -0.372726   0.310423  -1.201  0.23001
## PDS_score    -0.077949   0.027849  -2.799  0.00517 **
## interview_age 0.004245   0.002670   1.590  0.11202
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
```

```
## R-sq.(adj) =  0.00378
## lmer.REML = 5233.6  Scale est. = 0.73005   n = 2041
```

```
##                     stdcoef       stdse
## X(Intercept)    0.00000000 0.00000000
## XPDS_score     -0.06444037 0.02302285
## Xinterview_age  0.03643015 0.02291392
```

Male participants

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## putamen_rvsn_ant_z ~ PDS_score + interview_age
##
## Parametric coefficients:
##               Estimate Std. Error t value Pr(>|t|)
## (Intercept)  -0.422958   0.329720  -1.283    0.200
## PDS_score     0.005677   0.040377   0.141    0.888
## interview_age 0.003507   0.002797   1.254    0.210
##
##
## R-sq.(adj) =  -9.18e-05
## lmer.REML = 5571.2  Scale est. = 0.85641   n = 2057
```

```
##                      stdcoef       stdse
## X(Intercept)    0.000000000 0.00000000
## XPDS_score      0.003177134 0.02259754
## Xinterview_age  0.028240686 0.02252802
```

2.5 Model: Accumbens Anticipation ~ PDS

Female participants

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## accumbens_rvsn_ant_z ~ PDS_score + interview_age
##
## Parametric coefficients:
##                 Estimate Std. Error t value Pr(>|t|)
## (Intercept)  -0.0968160  0.2446591  -0.396    0.692
## PDS_score    -0.0008552  0.0219117  -0.039    0.969
## interview_age 0.0009134  0.0021051   0.434    0.664
##
##
## R-sq.(adj) =  -0.000795
## lmer.REML = 4276.4  Scale est. = 0.44122   n = 2044
```

```
##                   stdcoef        stdse
## X(Intercept)     0.0000000000 0.00000000
## XPDS_score      -0.0009005018 0.02307352
## Xinterview_age   0.0099580823 0.02295055
```

Male participants

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## accumbens_rvsn_ant_z ~ PDS_score + interview_age
##
## Parametric coefficients:
##                Estimate Std. Error t value Pr(>|t|)
## (Intercept)    0.324185   0.256773   1.263    0.207
## PDS_score      0.004833   0.031187   0.155    0.877
## interview_age -0.002717   0.002178  -1.247    0.212
##
##
## R-sq.(adj) =  -0.000206
## lmer.REML = 4574.9  Scale est. = 0.51375   n = 2059
```

```
##                  stdcoef        stdse
## X(Intercept)    0.00000000 0.00000000
## XPDS_score      0.00347335 0.02241537
## Xinterview_age -0.02794604 0.02240798
```

2.6 Model: Caudate Feedback ~ PDS

Female participants

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## caudate_posvsneg_feedback_z ~ PDS_score + interview_age
##
## Parametric coefficients:
##                Estimate Std. Error t value Pr(>|t|)
## (Intercept)    0.879700   0.304751   2.887  0.00394 **
## PDS_score     -0.021140   0.027194  -0.777  0.43703
## interview_age -0.007289   0.002625  -2.777  0.00553 **
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.00389
## lmer.REML = 5192.5  Scale est. = 0.73778   n = 2042
```

```
##                   stdcoef        stdse
## X(Intercept)     0.00000000 0.00000000
## XPDS_score      -0.01771233 0.02278498
## Xinterview_age  -0.06327810 0.02278498
```

Male participants

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## caudate_posvsneg_feedback_z ~ PDS_score + interview_age
##
## Parametric coefficients:
##                Estimate Std. Error t value Pr(>|t|)
## (Intercept)   -0.035148   0.308762  -0.114   0.9094
## PDS_score     -0.077997   0.037515  -2.079   0.0377 *
## interview_age  0.001494   0.002619   0.570   0.5686
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.00119
## lmer.REML = 5321.7  Scale est. = 0.77007   n = 2058
```

```
##                   stdcoef        stdse
## X(Intercept)     0.00000000 0.00000000
## XPDS_score      -0.04660337 0.02241512
## Xinterview_age   0.01277557 0.02240242
```

2.7 Model: Putamen Feedback ~ PDS

Female participants

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## putamen_posvsneg_feedback_z ~ PDS_score + interview_age
##
## Parametric coefficients:
##                Estimate Std. Error t value Pr(>|t|)
## (Intercept)    0.553835   0.291446   1.900   0.0575 .
## PDS_score      0.005590   0.026008   0.215   0.8298
## interview_age -0.005130   0.002509  -2.044   0.0410 *
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.00101
## lmer.REML = 5000.7  Scale est. = 0.67013   n = 2042
```

```
##                    stdcoef        stdse
## X(Intercept)    0.000000000 0.00000000
## XPDS_score       0.004926153 0.02291867
## Xinterview_age -0.046761914 0.02287379
```

Male participants

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## putamen_posvsneg_feedback_z ~ PDS_score + interview_age
##
## Parametric coefficients:
##                Estimate Std. Error t value Pr(>|t|)
## (Intercept)    0.2523532  0.3084372   0.818    0.413
## PDS_score     -0.0586858  0.0374986  -1.565    0.118
## interview_age -0.0007996  0.0026095  -0.306    0.759
##
##
## R-sq.(adj) =  0.000261
## lmer.REML = 5293.1  Scale est. = 0.75008   n = 2061
```

```
##                    stdcoef        stdse
## X(Intercept)    0.000000000 0.00000000
## XPDS_score      -0.035327960 0.02257361
## Xinterview_age -0.006884135 0.02246763
```

2.8 Model: Accumbens Feedback ~ PDS

Female participants

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## accumbens_posvsneg_feedback_z ~ PDS_score + interview_age
##
## Parametric coefficients:
##                Estimate Std. Error t value Pr(>|t|)
## (Intercept)    0.457768   0.230801   1.983   0.0475 *
## PDS_score     -0.001013   0.020566  -0.049   0.9607
## interview_age -0.003938   0.001988  -1.981   0.0477 *
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.00106
## lmer.REML = 4078.6  Scale est. = 0.42369   n = 2050
```

```
##                   stdcoef       stdse
## X(Intercept)     0.000000000 0.00000000
## XPDS_score      -0.001122932 0.02280433
## Xinterview_age  -0.045142102 0.02278977
```

Male participants

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## accumbens_posvsneg_feedback_z ~ PDS_score + interview_age
##
## Parametric coefficients:
##                Estimate Std. Error t value Pr(>|t|)
## (Intercept)   -0.068876   0.248955  -0.277    0.782
## PDS_score     -0.040808   0.030313  -1.346    0.178
## interview_age  0.001428   0.002110   0.677    0.499
##
##
## R-sq.(adj) =  -4.31e-05
## lmer.REML = 4395.9  Scale est. = 0.42192   n = 2054
```

```
##                   stdcoef       stdse
## X(Intercept)     0.00000000 0.00000000
## XPDS_score      -0.03050319 0.02265835
## Xinterview_age   0.01525776 0.02254534
```

2.9 Model: OFC Anticipation ~ PDS

Female participants

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## lOFC_rvsn_ant_z ~ PDS_score + interview_age
##
## Parametric coefficients:
##                 Estimate Std. Error t value Pr(>|t|)
## (Intercept)    0.0590386  0.2040969   0.289    0.772
## PDS_score      0.0037308  0.0182241   0.205    0.838
## interview_age -0.0004418  0.0017592  -0.251    0.802
##
##
## R-sq.(adj) =  -0.000933
## lmer.REML = 3536.8  Scale est. = 0.29608   n = 2038
```

```
##                   stdcoef       stdse
## X(Intercept)     0.000000000 0.00000000
```

```
## XPDS_score      0.004699434 0.02295576
## Xinterview_age -0.005755180 0.02291520


##
## Family: gaussian
## Link function: identity
##
## Formula:
## mOFC_rvsn_ant_z ~ PDS_score + interview_age
##
## Parametric coefficients:
##               Estimate Std. Error t value Pr(>|t|)
## (Intercept)   0.039678   0.234446   0.169    0.866
## PDS_score     0.008097   0.020912   0.387    0.699
## interview_age -0.000431  0.002020  -0.213    0.831
##
##
## R-sq.(adj) =  -0.000901
## lmer.REML = 4110.5  Scale est. = 0.43526   n = 2039


##                   stdcoef        stdse
## X(Intercept)    0.000000000 0.00000000
## XPDS_score      0.008856036 0.02287269
## Xinterview_age -0.004880368 0.02287269
```

Male participants

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## lOFC_rvsn_ant_z ~ PDS_score + interview_age
##
## Parametric coefficients:
##               Estimate Std. Error t value Pr(>|t|)
## (Intercept)  -0.222499   0.216526  -1.028    0.304
## PDS_score     0.027361   0.026581   1.029    0.303
## interview_age 0.001621   0.001839   0.882    0.378
##
##
## R-sq.(adj) =  0.000144
## lmer.REML = 3835.2  Scale est. = 0.34288   n = 2053


##                  stdcoef        stdse
## X(Intercept)   0.00000000 0.00000000
## XPDS_score     0.02328767 0.02262399
## Xinterview_age 0.01987765 0.02254881


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

```
##
## Formula:
## mOFC_rvsn_ant_z ~ PDS_score + interview_age
##
## Parametric coefficients:
##                 Estimate Std. Error t value Pr(>|t|)
## (Intercept)   -1.019e-01  2.360e-01  -0.432   0.6658
## PDS_score      7.386e-02  2.880e-02   2.565   0.0104 *
## interview_age  2.244e-05  2.005e-03   0.011   0.9911
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.00234
## lmer.REML = 4188.7  Scale est. = 0.40149   n = 2048


##                   stdcoef        stdse
## X(Intercept)    0.0000000000 0.00000000
## XPDS_score      0.0577094026 0.02250055
## Xinterview_age  0.0002516722 0.02248097
```

2.10 Model: OFC Feedback ~ PDS

Female participants

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## lOFC_posvsneg_feedback_z ~ PDS_score + interview_age
##
## Parametric coefficients:
##               Estimate Std. Error t value Pr(>|t|)
## (Intercept)   0.250497   0.179292   1.397    0.163
## PDS_score     0.009944   0.016003   0.621    0.534
## interview_age -0.002448   0.001545  -1.585    0.113
##
##
## R-sq.(adj) =  0.000286
## lmer.REML = 3018.9  Scale est. = 0.22332   n = 2039


##                  stdcoef        stdse
## X(Intercept)    0.00000000 0.00000000
## XPDS_score      0.01423897 0.02291448
## Xinterview_age -0.03622689 0.02286299


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

```
## mOFC_posvsneg_feedback_z ~ PDS_score + interview_age
##
## Parametric coefficients:
##                Estimate Std. Error t value Pr(>|t|)
## (Intercept)   0.0649137  0.2204114   0.295    0.768
## PDS_score     0.0101010  0.0197079   0.513    0.608
## interview_age -0.0007488  0.0018984  -0.394    0.693
##
##
## R-sq.(adj) =  -0.000837
## lmer.REML = 3842.5  Scale est. = 0.34392   n = 2040


##                     stdcoef       stdse
## X(Intercept)    0.000000000 0.00000000
## XPDS_score      0.011820358 0.02306259
## Xinterview_age -0.009053689 0.02295243
```

Male participants

```
##
## Family: gaussian
## Link function: identity
##
## Formula:
## lOFC_posvsneg_feedback_z ~ PDS_score + interview_age
##
## Parametric coefficients:
##               Estimate Std. Error t value Pr(>|t|)
## (Intercept)  -0.255747   0.195270  -1.310    0.190
## PDS_score     0.008412   0.023793   0.354    0.724
## interview_age 0.002314   0.001657   1.396    0.163
##
##
## R-sq.(adj) =  0.000154
## lmer.REML = 3464.9  Scale est. = 0.30926   n = 2063


##                    stdcoef       stdse
## X(Intercept)   0.000000000 0.00000000
## XPDS_score     0.007913114 0.02238156
## Xinterview_age 0.031243174 0.02238067


##
## Family: gaussian
## Link function: identity
##
## Formula:
## mOFC_posvsneg_feedback_z ~ PDS_score + interview_age
##
## Parametric coefficients:
##                Estimate Std. Error t value Pr(>|t|)
## (Intercept)   -0.0388540  0.2246313  -0.173    0.863
## PDS_score      0.0051199  0.0274503   0.187    0.852
## interview_age  0.0005642  0.0019075   0.296    0.767
```

```
##
##
## R-sq.(adj) =  -0.000943
## lmer.REML = 4026.3  Scale est. = 0.31384   n = 2061


##                    stdcoef       stdse
## X(Intercept)    0.000000000 0.00000000
## XPDS_score      0.004195959 0.02249664
## Xinterview_age  0.006638855 0.02244611
```

2.11 Model: Caudate Anticipation ~ Testosterone

Female participants

```
##
## 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)        -0.531423   0.328131  -1.620   0.1055
## hormone_scr_ert_mean -0.001464   0.001304  -1.122   0.2618
## interview_age       0.004989   0.002807   1.777   0.0757 .
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.0012
## lmer.REML = 5021.6  Scale est. = 0.79211   n = 1912


##                        stdcoef       stdse
## X(Intercept)          0.00000000 0.00000000
## Xhormone_scr_ert_mean -0.02656944 0.02367206
## Xinterview_age         0.04181201 0.02352831
```

Male participants

```
##
## 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)        -0.0749252  0.3460507  -0.217    0.829
## hormone_scr_ert_mean 0.0005271  0.0014419   0.366    0.715
## interview_age       0.0004707  0.0029241   0.161    0.872
```

```
##
##
## R-sq.(adj) =  -0.00095
## lmer.REML =   5192  Scale est. = 0.68188   n = 1902


##                          stdcoef       stdse
## X(Intercept)          0.000000000 0.00000000
## Xhormone_scr_ert_mean 0.008604649 0.02353898
## Xinterview_age        0.003757341 0.02333946
```

2.12 Model B: Putamen Anticipation ~ Testosterone

Female participants

```
##
## 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)         -0.3478527  0.3189046  -1.091    0.276
## hormone_scr_ert_mean -0.0009987  0.0012676  -0.788    0.431
## interview_age        0.0031484  0.0027281   1.154    0.249
##
##
## R-sq.(adj) =  -5.42e-05
## lmer.REML = 4908.4  Scale est. = 0.74226   n = 1910


##                          stdcoef       stdse
## X(Intercept)          0.00000000 0.00000000
## Xhormone_scr_ert_mean -0.01866909 0.02369479
## Xinterview_age        0.02718732 0.02355821
```

Male participants

```
##
## 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)         -0.363244   0.342533  -1.060    0.289
## hormone_scr_ert_mean  0.002011   0.001432   1.405    0.160
## interview_age         0.002573   0.002891   0.890    0.374
##
##
```

```
## R-sq.(adj) =  0.000718
## lmer.REML =   5149  Scale est. = 0.75484   n = 1902


##                            stdcoef       stdse
## X(Intercept)            0.00000000 0.00000000
## Xhormone_scr_ert_mean 0.03316219 0.02361121
## Xinterview_age          0.02075429 0.02332550
```

2.13 Model: Accumbens Anticipation ~ Testosterone

Female participants

```
##
## 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)          -0.1829273  0.2500379  -0.732   0.4645
## hormone_scr_ert_mean -0.0016855  0.0009949  -1.694   0.0904 .
## interview_age         0.0021275  0.0021417   0.993   0.3207
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.000853
## lmer.REML = 3998.8  Scale est. = 0.43208   n = 1913


##                            stdcoef       stdse
## X(Intercept)            0.00000000 0.00000000
## Xhormone_scr_ert_mean -0.04006650 0.02364976
## Xinterview_age          0.02337654 0.02353300
```

Male participants

```
##
## 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)           3.226e-01  2.699e-01   1.195    0.232
## hormone_scr_ert_mean -8.252e-05  1.113e-03  -0.074    0.941
## interview_age        -2.616e-03  2.280e-03  -1.148    0.251
##
##
```

```
## R-sq.(adj) =  -0.000323
## lmer.REML = 4277.2  Scale est. = 0.50131   n = 1905


##                                stdcoef       stdse
## X(Intercept)              0.000000000 0.00000000
## Xhormone_scr_ert_mean -0.001723489 0.02325383
## Xinterview_age           -0.026653729 0.02322433
```

2.14 Model: Caudate Feedback ~ Testosterone

Female participants

```
##
## 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)          0.964423   0.313893   3.072 0.002153 **
## hormone_scr_ert_mean 0.002594   0.001242   2.089 0.036870 *
## interview_age       -0.009086   0.002692  -3.375 0.000753 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.00588
## lmer.REML =   4870  Scale est. = 0.74202   n = 1908


##                               stdcoef       stdse
## X(Intercept)              0.00000000 0.00000000
## Xhormone_scr_ert_mean  0.04890655 0.02341514
## Xinterview_age           -0.07902547 0.02341514
```

Male participants

```
##
## 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)          0.0717921  0.3203480   0.224    0.823
## hormone_scr_ert_mean 0.0016157  0.0013266   1.218    0.223
## interview_age       -0.0006652  0.0027075  -0.246    0.806
##
##
```

```
## R-sq.(adj) =  -0.000306
## lmer.REML = 4914.7  Scale est. = 0.76342   n = 1903


##                              stdcoef        stdse
## X(Intercept)            0.000000000 0.00000000
## Xhormone_scr_ert_mean   0.028461130 0.02336805
## Xinterview_age         -0.005716953 0.02326983
```

2.15 Model: Putamen Feedback ~ Testosterone

Female participants

```
##
## 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)          0.612850   0.297927   2.057  0.03982 *
## hormone_scr_ert_mean 0.003420   0.001185   2.887  0.00393 **
## interview_age       -0.006594   0.002555  -2.581  0.00992 **
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.00534
## lmer.REML = 4670.6  Scale est. = 0.66657   n = 1909


##                              stdcoef        stdse
## X(Intercept)            0.00000000 0.00000000
## Xhormone_scr_ert_mean   0.06777610 0.02347543
## Xinterview_age         -0.06051217 0.02344254
```

Male participants

```
##
## 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)          0.400731   0.318183   1.259    0.208
## hormone_scr_ert_mean 0.001473   0.001325   1.112    0.266
## interview_age       -0.003093   0.002680  -1.154    0.248
##
##
```

```
## R-sq.(adj) =  -0.00011
## lmer.REML = 4880.1  Scale est. = 0.73977   n = 1907


##                           stdcoef       stdse
## X(Intercept)           0.00000000 0.00000000
## Xhormone_scr_ert_mean  0.02618158 0.02355376
## Xinterview_age        -0.02681733 0.02322933
```

2.16 Model: Accumbens Feedback ~ Testosterone

Female participants

```
##
## 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)          0.4856058  0.2310580    2.102    0.0357 *
## hormone_scr_ert_mean 0.0003708  0.0009171    0.404    0.6860
## interview_age       -0.0043599  0.0019815   -2.200    0.0279 *
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.00144
## lmer.REML =   3720  Scale est. = 0.40205   n = 1916


##                           stdcoef        stdse
## X(Intercept)           0.000000000 0.00000000
## Xhormone_scr_ert_mean  0.009488918 0.02346939
## Xinterview_age        -0.051581945 0.02344264
```

Male participants

```
##
## 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)          0.0489839  0.2610065    0.188    0.851
## hormone_scr_ert_mean 0.0014432  0.0010875    1.327    0.185
## interview_age       -0.0003314  0.0022052   -0.150    0.881
##
##
```

```
## R-sq.(adj) =  8.13e-05
## lmer.REML = 4104.6  Scale est. = 0.43257   n = 1899


##                              stdcoef       stdse
## X(Intercept)            0.000000000 0.00000000
## Xhormone_scr_ert_mean   0.031321924 0.02360226
## Xinterview_age         -0.003511598 0.02336325
```

2.17 Model: OFC Anticipation ~ Testosterone

Female participants

```
##
## 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)          0.0032153  0.2104991   0.015    0.988
## hormone_scr_ert_mean -0.0006606  0.0008361  -0.790    0.430
## interview_age         0.0002883  0.0018063   0.160    0.873
##
##
## R-sq.(adj) =  -0.0007
## lmer.REML = 3333.4  Scale est. = 0.30459   n = 1906


##                              stdcoef       stdse
## X(Intercept)            0.000000000 0.00000000
## Xhormone_scr_ert_mean  -0.018620645 0.02356633
## Xinterview_age          0.003757456 0.02354156


##
## 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)          0.0682507  0.2410390   0.283    0.777
## hormone_scr_ert_mean 0.0001874  0.0009567   0.196    0.845
## interview_age        -0.0006112  0.0020683  -0.295    0.768
##
##
## R-sq.(adj) =  -0.000996
## lmer.REML = 3854.2  Scale est. = 0.43627   n = 1906


##                              stdcoef       stdse
```

```
## X(Intercept)           0.000000000 0.00000000
## Xhormone_scr_ert_mean  0.004606623 0.02352115
## Xinterview_age        -0.006950428 0.02352115
```

Male participants

```
##
## 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)          -0.2768395  0.2264293  -1.223   0.2216
## hormone_scr_ert_mean -0.0015935  0.0009445  -1.687   0.0917 .
## interview_age         0.0028287  0.0019125   1.479   0.1393
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =   0.0012
## lmer.REML = 3579.8  Scale est. = 0.33303   n = 1899


##                        stdcoef      stdse
## X(Intercept)           0.00000000 0.00000000
## Xhormone_scr_ert_mean -0.03950549 0.02341628
## Xinterview_age         0.03445050 0.02329201


##
## 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)          -0.204876   0.247282  -0.829    0.407
## hormone_scr_ert_mean -0.001011   0.001023  -0.988    0.323
## interview_age         0.002031   0.002091   0.972    0.331
##
##
## R-sq.(adj) =  -0.000234
## lmer.REML = 3910.2  Scale est. = 0.40564   n = 1895


##                        stdcoef      stdse
## X(Intercept)           0.00000000 0.00000000
## Xhormone_scr_ert_mean -0.02309696 0.02337852
## Xinterview_age         0.02266259 0.02332311
```

2.18 Model: OFC Feedback ~ Testosterone

Female participants

```
##
## 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)          0.2773309  0.1834713   1.512   0.1308
## hormone_scr_ert_mean 0.0012000  0.0007282   1.648   0.0995 .
## interview_age       -0.0029118  0.0015740  -1.850   0.0645 .
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.0017
## lmer.REML = 2821.7  Scale est. = 0.21617   n = 1908


##                           stdcoef        stdse
## X(Intercept)           0.00000000 0.00000000
## Xhormone_scr_ert_mean  0.03876310 0.02352205
## Xinterview_age        -0.04343638 0.02348011


##
## 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)          0.1195496  0.2235176   0.535   0.593
## hormone_scr_ert_mean 0.0007248  0.0008892   0.815   0.415
## interview_age       -0.0012938  0.0019163  -0.675   0.500
##
##
## R-sq.(adj) =  -0.000459
## lmer.REML = 3559.8  Scale est. = 0.32991   n = 1910


##                           stdcoef        stdse
## X(Intercept)           0.00000000 0.00000000
## Xhormone_scr_ert_mean  0.01931141 0.02369241
## Xinterview_age        -0.01591504 0.02357242
```

Male participants

```
##
```

```
## 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)          -0.1175909  0.2030853  -0.579    0.563
## hormone_scr_ert_mean  0.0000585  0.0008427   0.069    0.945
## interview_age         0.0012925  0.0017167   0.753    0.452
##
##
## R-sq.(adj) =  -0.000733
## lmer.REML = 3216.5  Scale est. = 0.31125   n = 1909


##                          stdcoef       stdse
## X(Intercept)          0.000000000 0.00000000
## Xhormone_scr_ert_mean 0.001609679 0.02318664
## Xinterview_age        0.017456649 0.02318664


##
## 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)           0.0374550  0.2352774   0.159    0.874
## hormone_scr_ert_mean  0.0007922  0.0009749   0.813    0.417
## interview_age        -0.0001889  0.0019895  -0.095    0.924
##
##
## R-sq.(adj) =  -0.000776
## lmer.REML = 3761.8  Scale est. = 0.32397   n = 1907


##                           stdcoef       stdse
## X(Intercept)          0.000000000 0.00000000
## Xhormone_scr_ert_mean  0.018919183 0.02328135
## Xinterview_age        -0.002207377 0.02324932
```

2.19 Model: MID Reaction Time ~ Testosterone

Female participants

```
##
## 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)          -0.633165   0.323079  -1.960   0.0502 .
## hormone_scr_ert_mean -0.001511   0.001287  -1.174   0.2406
## interview_age         0.006170   0.002767   2.230   0.0259 *
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.00188
## lmer.REML = 5547.5  Scale est. = 0.69017   n = 2060


##                         stdcoef        stdse
## X(Intercept)          0.00000000 0.00000000
## Xhormone_scr_ert_mean -0.02654532 0.02261336
## Xinterview_age         0.05031463 0.02256225


##
## 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)          -0.3696554  0.3262044  -1.133    0.257
## hormone_scr_ert_mean -0.0008419  0.0012986  -0.648    0.517
## interview_age         0.0034240  0.0027933   1.226    0.220
##
##
## R-sq.(adj) =  4.58e-06
## lmer.REML = 5587.6  Scale est. = 0.75055   n = 2060


##                         stdcoef        stdse
## X(Intercept)          0.00000000 0.00000000
## Xhormone_scr_ert_mean -0.01466609 0.02262339
## Xinterview_age         0.02768875 0.02258842
```

Male participants

```
##
## 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)          0.0837097  0.3030565   0.276    0.782
```

```
## hormone_scr_ert_mean -0.0006574  0.0012592  -0.522     0.602
## interview_age         -0.0006073  0.0025605  -0.237     0.813
##
##
## R-sq.(adj) =  -0.000719
## lmer.REML = 5514.9  Scale est. = 0.71939   n = 2133


##                           stdcoef      stdse
## X(Intercept)          0.00000000 0.00000000
## Xhormone_scr_ert_mean -0.01157785 0.02217728
## Xinterview_age        -0.00522356 0.02202364


##
## 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)            0.1149651  0.3045511   0.377    0.706
## hormone_scr_ert_mean  -0.0013004  0.0012582  -1.034    0.301
## interview_age         -0.0004868  0.0025746  -0.189    0.850
##
##
## R-sq.(adj) =  -0.000388
## lmer.REML = 5554.6  Scale est. = 0.77615   n = 2133


##                           stdcoef      stdse
## X(Intercept)           0.000000000 0.00000000
## Xhormone_scr_ert_mean -0.022694149 0.02195786
## Xinterview_age        -0.004149015 0.02194322
```

2.20 Model: BIS-BAS-RR ~ Testosterone

Female participants

```
##
## 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)            0.346829   0.314583   1.103    0.270
## hormone_scr_ert_mean  -0.001039   0.001247  -0.833    0.405
## interview_age         -0.002943   0.002683  -1.097    0.273
##
##
```

```
## R-sq.(adj) =  0.000485
## lmer.REML = 7026.8  Scale est. = 0.70702   n = 2502
```

```
##                            stdcoef        stdse
## X(Intercept)           0.00000000 0.00000000
## Xhormone_scr_ert_mean -0.01725639 0.02071182
## Xinterview_age        -0.02254169 0.02055015
```

Male participants

```
##
## 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)           0.206422   0.298770   0.691   0.4897
## hormone_scr_ert_mean  0.002087   0.001241   1.682   0.0927 .
## interview_age        -0.001662   0.002524  -0.658   0.5103
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.00097
## lmer.REML = 7467.5  Scale est. = 0.72308   n = 2698
```

```
##                            stdcoef        stdse
## X(Intercept)           0.00000000 0.00000000
## Xhormone_scr_ert_mean  0.03364639 0.02000537
## Xinterview_age        -0.01293329 0.01964147
```

3—Internalizing~Reward—

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

Female participants

```
##
## 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)          6.03142    1.86213   3.239  0.00122 **
```

```
## accumbens_rvsn_ant_z -0.04281    0.16866  -0.254  0.79968
## interview_age         -0.00972    0.01557  -0.624  0.53257
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  -0.000632
## lmer.REML =  12626  Scale est. = 11.232    n = 2044


##                          stdcoef       stdse
## X(Intercept)          0.000000000 0.00000000
## Xaccumbens_rvsn_ant_z -0.005427053 0.02138326
## Xinterview_age        -0.013435302 0.02152431
```

Male participants

```
##
## 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)          3.25746    1.86102   1.750   0.0802 .
## accumbens_rvsn_ant_z -0.14197    0.15732  -0.902   0.3669
## interview_age         0.01252    0.01550   0.808   0.4195
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  -0.000586
## lmer.REML =  12672  Scale est. = 18.374    n = 2059


##                         stdcoef       stdse
## X(Intercept)          0.00000000 0.00000000
## Xaccumbens_rvsn_ant_z -0.01970131 0.02183160
## Xinterview_age         0.01786603 0.02212499
```

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

Female participants

```
##
## 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)        6.09957    1.86424   3.272  0.00109 **
## caudate_rvsn_ant_z -0.02686    0.12935  -0.208  0.83552
## interview_age      -0.01023    0.01559  -0.656  0.51174
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  -0.000647
## lmer.REML =  12629  Scale est. = 11.292    n = 2044


##                       stdcoef       stdse
## X(Intercept)       0.000000000 0.00000000
## Xcaudate_rvsn_ant_z -0.004436974 0.02136731
## Xinterview_age     -0.014126520 0.02152610
```

Male participants

```
##
## 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)        3.49750    1.86404   1.876   0.0608 .
## caudate_rvsn_ant_z -0.10650    0.12325  -0.864   0.3876
## interview_age      0.01067    0.01552   0.687   0.4919
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  -0.000812
## lmer.REML =  12656  Scale est. = 18.614    n = 2056


##                       stdcoef       stdse
## X(Intercept)       0.00000000 0.00000000
## Xcaudate_rvsn_ant_z -0.01892928 0.02190619
## Xinterview_age      0.01521727 0.02213864
```

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

Female participants

```
##
## 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)       5.934388   1.857662   3.195  0.00142 **
## putamen_rvsn_ant_z -0.095198   0.132427  -0.719  0.47230
## interview_age      -0.008957   0.015537  -0.577  0.56434
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  -0.000598
## lmer.REML =  12595  Scale est. = 11.211    n = 2041


##                       stdcoef       stdse
## X(Intercept)        0.00000000 0.00000000
## Xputamen_rvsn_ant_z -0.01538262 0.02139824
## Xinterview_age      -0.01242203 0.02154710
```

Male participants

```
##
## 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)        3.35048    1.85734   1.804   0.0714 .
## putamen_rvsn_ant_z -0.15563    0.12301  -1.265   0.2060
## interview_age       0.01181    0.01547   0.763   0.4453
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  -0.000471
## lmer.REML =  12647  Scale est. = 18.132    n = 2057


##                       stdcoef       stdse
## X(Intercept)        0.00000000 0.00000000
## Xputamen_rvsn_ant_z -0.02763637 0.02184387
## Xinterview_age       0.01688681 0.02212169
```

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

Female participants

```
##
## 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)                    5.830691   1.856144   3.141  0.00171 **
## accumbens_posvsneg_feedback_z -0.050476   0.176282  -0.286  0.77465
## interview_age                 -0.008162   0.015527  -0.526  0.59916
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  -0.000578
## lmer.REML =  12646  Scale est. = 11.21     n = 2050


##                                   stdcoef       stdse
## X(Intercept)                   0.000000000 0.00000000
## Xaccumbens_posvsneg_feedback_z -0.006103001 0.02131392
## Xinterview_age                 -0.011313685 0.02152144
```

Male participants

```
##
## 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)                    3.20768    1.84860   1.735   0.0829 .
## accumbens_posvsneg_feedback_z  0.32112    0.16304   1.970   0.0490 *
## interview_age                  0.01259    0.01539   0.818   0.4137
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.000399
## lmer.REML =  12603  Scale est. = 18.899     n = 2054


##                                  stdcoef       stdse
## X(Intercept)                   0.00000000 0.00000000
## Xaccumbens_posvsneg_feedback_z 0.04319714 0.02193190
## Xinterview_age                 0.01808956 0.02212641
```

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

Female participants

```
##
## 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)                   6.08504    1.86838   3.257  0.00115 **
## caudate_posvsneg_feedback_z  -0.18760    0.13267  -1.414  0.15750
## interview_age                -0.01029    0.01562  -0.659  0.51010
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.000878
## lmer.REML =  12610  Scale est. = 11.326    n = 2042


##                                    stdcoef       stdse
## X(Intercept)                    0.00000000 0.00000000
## Xcaudate_posvsneg_feedback_z   -0.02984372 0.02110522
## Xinterview_age                 -0.01421366 0.02157502
```

Male participants

```
##
## 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)                  3.781203   1.865165   2.027   0.0428 *
## caudate_posvsneg_feedback_z  0.141738   0.131057   1.082   0.2796
## interview_age                0.008144   0.015537   0.524   0.6002
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  -0.000857
## lmer.REML =  12670  Scale est. = 18.536    n = 2058


##                                    stdcoef       stdse
## X(Intercept)                    0.00000000 0.00000000
## Xcaudate_posvsneg_feedback_z    0.02360106 0.02182246
## Xinterview_age                  0.01159805 0.02212483
```

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

Female participants

```
##
```

```
## 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)                  5.870302   1.864372   3.149  0.00166 **
## putamen_posvsneg_feedback_z -0.099433   0.139287  -0.714  0.47539
## interview_age               -0.008449   0.015591  -0.542  0.58795
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  -0.000157
## lmer.REML =  12610  Scale est. = 11.281    n = 2042


##                                  stdcoef        stdse
## X(Intercept)                  0.00000000 0.00000000
## Xputamen_posvsneg_feedback_z -0.01507505 0.02111722
## Xinterview_age               -0.01167656 0.02154777
```

Male participants

```
##
## 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)                   3.54548    1.86842   1.898   0.0579 .
## putamen_posvsneg_feedback_z   0.13679    0.13284   1.030   0.3032
## interview_age                 0.01013    0.01556   0.651   0.5149
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  -0.00108
## lmer.REML =  12701  Scale est. = 18.877    n = 2061


##                                  stdcoef        stdse
## X(Intercept)                  0.00000000 0.00000000
## Xputamen_posvsneg_feedback_z 0.02257279 0.02192055
## Xinterview_age               0.01439570 0.02210408
```

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

Female participants

```
##
## 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)      5.886252   1.871858   3.145  0.00169 **
## lOFC_rvsn_ant_z  0.028463   0.202850   0.140  0.88843
## interview_age   -0.008492   0.015651  -0.543  0.58746
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  -0.000729
## lmer.REML =  12589  Scale est. = 11.525    n = 2038


##                     stdcoef       stdse
## X(Intercept)      0.000000000 0.00000000
## XlOFC_rvsn_ant_z  0.003020377 0.02152582
## Xinterview_age   -0.011738081 0.02163280


##
## 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)      5.859094   1.868796   3.135  0.00174 **
## mOFC_rvsn_ant_z  0.158153   0.173166   0.913  0.36119
## interview_age   -0.008187   0.015629  -0.524  0.60045
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  -0.000132
## lmer.REML =  12597  Scale est. = 11.352    n = 2039


##                     stdcoef       stdse
## X(Intercept)      0.00000000 0.00000000
## XmOFC_rvsn_ant_z  0.01926434 0.02109318
## Xinterview_age   -0.01129104 0.02155432
```

Male participants

```
##
## 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)      2.59775    1.84642   1.407    0.160
## lOFC_rvsn_ant_z  0.01023    0.18646   0.055    0.956
## interview_age    0.01775    0.01538   1.155    0.248
##
##
## R-sq.(adj) =  -0.000919
## lmer.REML =  12592  Scale est. = 18.062    n = 2053
```

```
##                   stdcoef        stdse
## X(Intercept)     0.000000000 0.00000000
## XlOFC_rvsn_ant_z 0.001201186 0.02190392
## Xinterview_age   0.025574945 0.02215096
```

```
##
## 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)      2.66849    1.85435   1.439    0.150
## mOFC_rvsn_ant_z  0.25414    0.17105   1.486    0.137
## interview_age    0.01724    0.01544   1.116    0.264
##
##
## R-sq.(adj) =  0.000328
## lmer.REML =  12576  Scale est. = 18.194    n = 2048
```

```
##                   stdcoef        stdse
## X(Intercept)     0.00000000 0.00000000
## XmOFC_rvsn_ant_z 0.03252081 0.02188820
## Xinterview_age   0.02474006 0.02216395
```

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

Female participants

```
##
## 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)               5.888613   1.861224   3.164  0.00158 **
## lOFC_posvsneg_feedback_z -0.237566   0.228693  -1.039  0.29902
## interview_age            -0.008663   0.015572  -0.556  0.57803
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  4.13e-05
## lmer.REML =  12579  Scale est. = 11.213    n = 2039


##                                stdcoef       stdse
## X(Intercept)                0.00000000 0.00000000
## XlOFC_posvsneg_feedback_z  -0.02224531 0.02141444
## Xinterview_age             -0.01200652 0.02158089


##
## 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)               5.973940   1.863262   3.206  0.00137 **
## mOFC_posvsneg_feedback_z -0.159334   0.188165  -0.847  0.39722
## interview_age            -0.009333   0.015591  -0.599  0.54951
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.000255
## lmer.REML =  12595  Scale est. = 11.397    n = 2040


##                                stdcoef       stdse
## X(Intercept)                0.00000000 0.00000000
## XmOFC_posvsneg_feedback_z  -0.01821223 0.02150767
## Xinterview_age             -0.01289717 0.02154552
```

Male participants

```
##
## 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)                3.13068    1.84350   1.698   0.0896 .
## lOFC_posvsneg_feedback_z   0.06848    0.20435   0.335   0.7376
## interview_age              0.01345    0.01535   0.876   0.3810
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  -0.00105
## lmer.REML =  12663  Scale est. = 18.043    n = 2063


##                                 stdcoef       stdse
## X(Intercept)               0.000000000 0.00000000
## XlOFC_posvsneg_feedback_z  0.007299579 0.02178333
## Xinterview_age             0.019366812 0.02210083


##
## 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)                3.17570    1.84275   1.723    0.085 .
## mOFC_posvsneg_feedback_z   0.26532    0.17873   1.484    0.138
## interview_age              0.01304    0.01535   0.850    0.396
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  -0.000177
## lmer.REML =  12652  Scale est. = 18.142    n = 2061


##                                 stdcoef       stdse
## X(Intercept)               0.00000000 0.00000000
## XmOFC_posvsneg_feedback_z  0.03243102 0.02184718
## Xinterview_age             0.01875492 0.02207703
```

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

Female participants

```
##
## 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)        4.576754   1.717826   2.664  0.00776 **
## bisbas_ss_basm_rr -0.070300   0.044419  -1.583  0.11362
## interview_age      0.008269   0.013933   0.593  0.55293
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  -0.000292
## lmer.REML =  16721  Scale est. = 12.884    n = 2690


##                      stdcoef        stdse
## X(Intercept)       0.00000000 0.00000000
## Xbisbas_ss_basm_rr -0.02987863 0.01887900
## Xinterview_age      0.01127390 0.01899736
```

Male participants

```
##
## 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)        3.61046    1.69125   2.135   0.0329 *
## bisbas_ss_basm_rr  0.01025    0.04427   0.231   0.8169
## interview_age      0.01103    0.01370   0.805   0.4209
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  -0.000755
## lmer.REML =  18150  Scale est. = 16.374    n = 2908


##                      stdcoef        stdse
## X(Intercept)       0.000000000 0.00000000
## Xbisbas_ss_basm_rr 0.004259592 0.01840036
## Xinterview_age     0.014952359 0.01857515
```

3.10 Model: CBCL internalizing factor ~ MID Reaction Time

Female participants

```
##
## 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)              6.34845    1.78964   3.547 0.000397 ***
## rt_diff_large_neutral_z  0.13672    0.12031   1.136 0.255921
## interview_age           -0.01246    0.01495  -0.833 0.404751
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
## 
## 
## R-sq.(adj) =  -5.14e-06
## lmer.REML =  13581  Scale est. = 11.707    n = 2201


##                             stdcoef       stdse
## X(Intercept)             0.00000000 0.00000000
## Xrt_diff_large_neutral_z 0.02353331 0.02070898
## Xinterview_age          -0.01731784 0.02078157


## 
## 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)            6.25233    1.78792   3.497  0.00048 ***
## rt_diff_large_small_z -0.15739    0.11917  -1.321  0.18675
## interview_age         -0.01158    0.01493  -0.775  0.43813
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
## 
## 
## R-sq.(adj) =  -0.000251
## lmer.REML =  13580  Scale est. = 11.639    n = 2201


##                           stdcoef       stdse
## X(Intercept)           0.00000000 0.00000000
## Xrt_diff_large_small_z -0.02721487 0.02060706
## Xinterview_age         -0.01609858 0.02075907
```

Male participants

```
## 
## 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)             2.95337    1.77854   1.661   0.0969 .
## rt_diff_large_neutral_z 0.04500    0.12536   0.359   0.7197
## interview_age           0.01547    0.01482   1.044   0.2965
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  -0.000758
## lmer.REML =  14182  Scale est. = 17.631    n = 2297


##                            stdcoef       stdse
## X(Intercept)            0.00000000 0.00000000
## Xrt_diff_large_neutral_z 0.00742118 0.02067627
## Xinterview_age          0.02185601 0.02093084


##
## 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)            2.96179    1.77843   1.665    0.096 .
## rt_diff_large_small_z -0.07562    0.12322  -0.614    0.539
## interview_age          0.01540    0.01481   1.040    0.299
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  -0.000672
## lmer.REML =  14181  Scale est. = 17.688    n = 2297


##                           stdcoef       stdse
## X(Intercept)           0.00000000 0.00000000
## Xrt_diff_large_small_z -0.01266907 0.02064481
## Xinterview_age          0.02175852 0.02092903
```

4—Internalizing~Puberty x Reward—

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

Female participants

```
##
## 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)                   4.93246    2.07818   2.373 0.017717 *
## PDS_score                     0.66789    0.17883   3.735 0.000193 ***
## accumbens_rvsn_ant_z         -0.74666    0.42905  -1.740 0.081967 .
## race.ethnicity.5levelBlack    0.54545    0.89101   0.612 0.540495
## race.ethnicity.5levelMixed    2.34273    0.87490   2.678 0.007473 **
## race.ethnicity.5levelOther    2.34680    0.99199   2.366 0.018089 *
## race.ethnicity.5levelWhite    1.35252    0.82265   1.644 0.100314
## demo_race_hispanic1           0.49442    0.34785   1.421 0.155373
## interview_age                -0.02243    0.01629  -1.377 0.168697
## PDS_score:accumbens_rvsn_ant_z 0.42529   0.23874   1.781 0.074993 .
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.0145
## lmer.REML =  12315  Scale est. = 11.173    n = 1999


##                                  stdcoef        stdse
## X(Intercept)                  0.00000000 0.00000000
## XPDS_score                    0.08899043 0.02382796
## Xaccumbens_rvsn_ant_z        -0.09396490 0.05399451
## Xrace.ethnicity.5levelBlack   0.03339004 0.05454371
## Xrace.ethnicity.5levelMixed   0.14413866 0.05382876
## Xrace.ethnicity.5levelOther   0.09479789 0.04007102
## Xrace.ethnicity.5levelWhite   0.11707848 0.07121143
## Xdemo_race_hispanic1          0.03675147 0.02585679
## Xinterview_age               -0.03088277 0.02242913
## XPDS_score:accumbens_rvsn_ant_z 0.09588237 0.05382300
```

Male participants

```
##
## 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)                  1.105143   2.013195   0.549  0.58310
## PDS_score                    0.744167   0.231992   3.208  0.00136 **
## accumbens_rvsn_ant_z        -0.182527   0.432717  -0.422  0.67321
## race.ethnicity.5levelBlack   1.141776   0.870109   1.312  0.18960
```

```
## race.ethnicity.5levelMixed          2.816734   0.860474   3.273   0.00108 **
## race.ethnicity.5levelOther          2.802547   0.990415   2.830   0.00471 **
## race.ethnicity.5levelWhite          2.105762   0.809086   2.603   0.00932 **
## demo_race_hispanic1                 0.032827   0.334966   0.098   0.92194
## interview_age                       0.004667   0.015736   0.297   0.76681
## PDS_score:accumbens_rvsn_ant_z      0.032985   0.298462   0.111   0.91201
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =   0.01
## lmer.REML =  12349  Scale est. = 18.343    n = 2017


##                                  stdcoef       stdse
## X(Intercept)                 0.000000000 0.00000000
## XPDS_score                   0.075294613 0.02347290
## Xaccumbens_rvsn_ant_z       -0.025438342 0.06030683
## Xrace.ethnicity.5levelBlack  0.071353141 0.05437581
## Xrace.ethnicity.5levelMixed  0.178180769 0.05443179
## Xrace.ethnicity.5levelOther  0.110302206 0.03898061
## Xrace.ethnicity.5levelWhite  0.186781241 0.07176600
## Xdemo_race_hispanic1         0.002517770 0.02569164
## Xinterview_age               0.006725127 0.02267481
## XPDS_score:accumbens_rvsn_ant_z  0.006671157 0.06036306
```

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

Female participants

```
##
## 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)                  5.16482    2.08805   2.474 0.013462 *
## PDS_score                    0.69019    0.17965   3.842 0.000126 ***
## caudate_rvsn_ant_z          -0.11993    0.32559  -0.368 0.712651
## race.ethnicity.5levelBlack   0.54705    0.89316   0.612 0.540289
## race.ethnicity.5levelMixed   2.29666    0.87576   2.622 0.008796 **
## race.ethnicity.5levelOther   2.30580    0.99182   2.325 0.020181 *
## race.ethnicity.5levelWhite   1.32860    0.82400   1.612 0.107037
## demo_race_hispanic1          0.49035    0.34786   1.410 0.158803
## interview_age               -0.02440    0.01638  -1.490 0.136466
## PDS_score:caudate_rvsn_ant_z 0.05174    0.18124   0.285 0.775296
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
```

```
##
## R-sq.(adj) =  0.0131
## lmer.REML =  12316  Scale est. = 11.35     n = 1998


##                                  stdcoef       stdse
## X(Intercept)                  0.00000000 0.00000000
## XPDS_score                    0.09168964 0.02386600
## Xcaudate_rvsn_ant_z          -0.01968152 0.05343153
## Xrace.ethnicity.5levelBlack   0.03330435 0.05437603
## Xrace.ethnicity.5levelMixed   0.14172435 0.05404239
## Xrace.ethnicity.5levelOther   0.09311051 0.04005049
## Xrace.ethnicity.5levelWhite   0.11491193 0.07126832
## Xdemo_race_hispanic1          0.03640186 0.02582355
## Xinterview_age               -0.03354718 0.02251966
## XPDS_score:caudate_rvsn_ant_z 0.01524638 0.05340356
```

Male participants

```
##
## 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)                 1.335424   2.020919   0.661 0.508816
## PDS_score                   0.766072   0.231952   3.303 0.000974 ***
## caudate_rvsn_ant_z          0.282502   0.351648   0.803 0.421859
## race.ethnicity.5levelBlack  1.034625   0.889356   1.163 0.244829
## race.ethnicity.5levelMixed  2.698696   0.880718   3.064 0.002212 **
## race.ethnicity.5levelOther  2.779288   1.004888   2.766 0.005731 **
## race.ethnicity.5levelWhite  2.023427   0.830117   2.438 0.014875 *
## demo_race_hispanic1         0.055234   0.336414   0.164 0.869603
## interview_age               0.003298   0.015749   0.209 0.834160
## PDS_score:caudate_rvsn_ant_z -0.297277  0.244097  -1.218 0.223418
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.0104
## lmer.REML =  12338  Scale est. = 18.37     n = 2015


##                                  stdcoef       stdse
## X(Intercept)                  0.000000000 0.00000000
## XPDS_score                    0.077470881 0.02345668
## Xcaudate_rvsn_ant_z           0.050628423 0.06302045
## Xrace.ethnicity.5levelBlack   0.064762432 0.05566931
## Xrace.ethnicity.5levelMixed   0.170105930 0.05551395
## Xrace.ethnicity.5levelOther   0.110541978 0.03996791
## Xrace.ethnicity.5levelWhite   0.179347856 0.07357803
```

```
## Xdemo_race_hispanic1          0.004223753 0.02572579
## Xinterview_age                0.004747977 0.02267455
## XPDS_score:caudate_rvsn_ant_z -0.076813601 0.06307229
```

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

Female participants

```
##
## 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)                  4.97477    2.07632   2.396 0.016669 *
## PDS_score                    0.69413    0.17949   3.867 0.000114 ***
## putamen_rvsn_ant_z          -0.37583    0.32746  -1.148 0.251214
## race.ethnicity.5levelBlack   0.59070    0.88838   0.665 0.506182
## race.ethnicity.5levelMixed   2.32554    0.87167   2.668 0.007695 **
## race.ethnicity.5levelOther   2.29813    0.98931   2.323 0.020281 *
## race.ethnicity.5levelWhite   1.29941    0.81989   1.585 0.113158
## demo_race_hispanic1          0.50620    0.34697   1.459 0.144749
## interview_age               -0.02287    0.01628  -1.404 0.160369
## PDS_score:putamen_rvsn_ant_z 0.18597    0.18035   1.031 0.302586
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.014
## lmer.REML =  12281  Scale est. = 11.319    n = 1995


##                                 stdcoef       stdse
## X(Intercept)                 0.00000000 0.00000000
## XPDS_score                   0.09255025 0.02393170
## Xputamen_rvsn_ant_z         -0.06021333 0.05246248
## Xrace.ethnicity.5levelBlack  0.03618439 0.05441955
## Xrace.ethnicity.5levelMixed  0.14390731 0.05394014
## Xrace.ethnicity.5levelOther  0.09322116 0.04013015
## Xrace.ethnicity.5levelWhite  0.11286005 0.07121149
## Xdemo_race_hispanic1         0.03777751 0.02589438
## Xinterview_age              -0.03158244 0.02248890
## XPDS_score:putamen_rvsn_ant_z 0.05394806 0.05231720
```

Male participants

```
##
## 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)                1.097535   2.015001   0.545 0.586033
## PDS_score                  0.793779   0.232575   3.413 0.000655 ***
## putamen_rvsn_ant_z         0.681711   0.349735   1.949 0.051408 .
## race.ethnicity.5levelBlack 1.111177   0.886597   1.253 0.210240
## race.ethnicity.5levelMixed 2.732572   0.875784   3.120 0.001833 **
## race.ethnicity.5levelOther 2.662829   1.004894   2.650 0.008116 **
## race.ethnicity.5levelWhite 2.059703   0.827160   2.490 0.012851 *
## demo_race_hispanic1       -0.001105   0.335942  -0.003 0.997377
## interview_age              0.004782   0.015710   0.304 0.760864
## PDS_score:putamen_rvsn_ant_z -0.637708 0.246660  -2.585 0.009797 **
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.0125
## lmer.REML =  12328  Scale est. = 17.583    n = 2016


##                                  stdcoef       stdse
## X(Intercept)                0.0000000000 0.00000000
## XPDS_score                  0.0799458470 0.02342394
## Xputamen_rvsn_ant_z         0.1218344044 0.06250409
## Xrace.ethnicity.5levelBlack 0.0694445332 0.05540909
## Xrace.ethnicity.5levelMixed 0.1740559719 0.05578460
## Xrace.ethnicity.5levelOther 0.1049969322 0.03962356
## Xrace.ethnicity.5levelWhite 0.1830151498 0.07349741
## Xdemo_race_hispanic1       -0.0000845667 0.02571651
## Xinterview_age              0.0068968450 0.02265804
## XPDS_score:putamen_rvsn_ant_z -0.1616275006 0.06251620
```

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

Female participants

```
##
## 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)          4.90115    2.09807   2.336 0.019589 *
```

```
## PDS_score                      0.66515    0.17977    3.700 0.000222 ***
## lOFC_rvsn_ant_z                0.01527    0.52247    0.029 0.976689
## race.ethnicity.5levelBlack     0.52114    0.89989    0.579 0.562581
## race.ethnicity.5levelMixed     2.24412    0.88436    2.538 0.011239 *
## race.ethnicity.5levelOther     2.23647    1.00065    2.235 0.025527 *
## race.ethnicity.5levelWhite     1.24974    0.83231    1.502 0.133380
## demo_race_hispanic1            0.51354    0.34902    1.471 0.141342
## interview_age                 -0.02142    0.01641   -1.305 0.192031
## PDS_score:lOFC_rvsn_ant_z      0.03931    0.28333    0.139 0.889677
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.0124
## lmer.REML =  12288  Scale est. = 11.562    n = 1994


##                                  stdcoef        stdse
## X(Intercept)                 0.000000000 0.00000000
## XPDS_score                   0.088727047 0.02398104
## XlOFC_rvsn_ant_z             0.001601394 0.05479781
## Xrace.ethnicity.5levelBlack  0.031889966 0.05506718
## Xrace.ethnicity.5levelMixed  0.138259645 0.05448509
## Xrace.ethnicity.5levelOther  0.091050210 0.04073797
## Xrace.ethnicity.5levelWhite  0.108336858 0.07215133
## Xdemo_race_hispanic1         0.038283997 0.02601878
## Xinterview_age              -0.029496615 0.02260208
## XPDS_score:lOFC_rvsn_ant_z   0.007601278 0.05479157
```

Male participants

```
##
## 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)                 0.43320    1.99732   0.217  0.82831
## PDS_score                   0.65010    0.23340   2.785  0.00540 **
## lOFC_rvsn_ant_z            -0.47040    0.51114  -0.920  0.35753
## race.ethnicity.5levelBlack  1.16389    0.86244   1.350  0.17732
## race.ethnicity.5levelMixed  2.77910    0.85230   3.261  0.00113 **
## race.ethnicity.5levelOther  2.81399    0.97983   2.872  0.00412 **
## race.ethnicity.5levelWhite  2.03614    0.80073   2.543  0.01107 *
## demo_race_hispanic1        -0.05505    0.33262  -0.166  0.86856
## interview_age               0.01162    0.01563   0.743  0.45750
## PDS_score:lOFC_rvsn_ant_z   0.33920    0.34826   0.974  0.33017
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
```

```
##
## R-sq.(adj) =  0.00873
## lmer.REML =  12290  Scale est. = 17.836    n = 2014


##                                stdcoef        stdse
## X(Intercept)              0.000000000 0.00000000
## XPDS_score                0.065971761 0.02368487
## XlOFC_rvsn_ant_z         -0.055571732 0.06038459
## Xrace.ethnicity.5levelBlack  0.072989147 0.05408490
## Xrace.ethnicity.5levelMixed  0.177068361 0.05430378
## Xrace.ethnicity.5levelOther  0.112541004 0.03918660
## Xrace.ethnicity.5levelWhite  0.182090163 0.07160877
## Xdemo_race_hispanic1     -0.004259226 0.02573431
## Xinterview_age            0.016891116 0.02273038
## XPDS_score:lOFC_rvsn_ant_z  0.058918560 0.06049135
```

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

Female participants

```
##
## 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)             4.84149    2.09453   2.311 0.020908 *
## PDS_score               0.66802    0.17956   3.720 0.000204 ***
## mOFC_rvsn_ant_z        -0.03687    0.43630  -0.085 0.932667
## race.ethnicity.5levelBlack  0.51760    0.90004   0.575 0.565296
## race.ethnicity.5levelMixed  2.25855    0.88469   2.553 0.010757 *
## race.ethnicity.5levelOther  2.31830    1.00294   2.312 0.020907 *
## race.ethnicity.5levelWhite  1.29551    0.83274   1.556 0.119937
## demo_race_hispanic1     0.49881    0.34895   1.429 0.153030
## interview_age          -0.02114    0.01638  -1.291 0.196961
## PDS_score:mOFC_rvsn_ant_z  0.13133    0.23937   0.549 0.583311
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.0134
## lmer.REML =  12296  Scale est. = 11.364    n = 1995


##                                stdcoef        stdse
## X(Intercept)              0.000000000 0.00000000
## XPDS_score                0.088811347 0.02387143
## XmOFC_rvsn_ant_z         -0.004478575 0.05300058
## Xrace.ethnicity.5levelBlack  0.031642800 0.05502242
```

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```
## Xrace.ethnicity.5levelMixed  0.138775931 0.05435980
## Xrace.ethnicity.5levelOther  0.093688857 0.04053143
## Xrace.ethnicity.5levelWhite  0.112013216 0.07200151
## Xdemo_race_hispanic1         0.037053451 0.02592132
## Xinterview_age             -0.029046868 0.02250487
## XPDS_score:mOFC_rvsn_ant_z   0.029045655 0.05294075
```

Male participants

```
##
## 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)               0.622361   2.005242   0.310  0.75631
## PDS_score                 0.686285   0.232818   2.948  0.00324 **
## mOFC_rvsn_ant_z           0.217975   0.462027   0.472  0.63713
## race.ethnicity.5levelBlack 1.086841  0.866342   1.255  0.20980
## race.ethnicity.5levelMixed 2.697266  0.855655   3.152  0.00164 **
## race.ethnicity.5levelOther 2.781770  0.980968   2.836  0.00462 **
## race.ethnicity.5levelWhite 2.016291  0.803861   2.508  0.01221 *
## demo_race_hispanic1      -0.014152   0.332878  -0.043  0.96609
## interview_age             0.009891   0.015680   0.631  0.52825
## PDS_score:mOFC_rvsn_ant_z 0.018780   0.301677   0.062  0.95037
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.0102
## lmer.REML =  12260  Scale est. = 18.013    n = 2007


##                                stdcoef        stdse
## X(Intercept)               0.000000000 0.00000000
## XPDS_score                 0.069700171 0.02364538
## XmOFC_rvsn_ant_z           0.028062735 0.05948261
## Xrace.ethnicity.5levelBlack 0.067640207 0.05391732
## Xrace.ethnicity.5levelMixed 0.171479098 0.05439839
## Xrace.ethnicity.5levelOther 0.111613818 0.03935968
## Xrace.ethnicity.5levelWhite 0.179665859 0.07162969
## Xdemo_race_hispanic1      -0.001093349 0.02571684
## Xinterview_age             0.014339695 0.02273278
## XPDS_score:mOFC_rvsn_ant_z 0.003714531 0.05966866
```

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

Female participants

```
##
```

```
## 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)                               4.86589    2.07602   2.344  0.01918
## PDS_score                                 0.68636    0.17813   3.853  0.00012
## accumbens_posvsneg_feedback_z            -0.39320    0.44400  -0.886  0.37595
## race.ethnicity.5levelBlack                0.54437    0.88849   0.613  0.54015
## race.ethnicity.5levelMixed                2.21939    0.87236   2.544  0.01103
## race.ethnicity.5levelOther                2.36260    0.98666   2.395  0.01673
## race.ethnicity.5levelWhite                1.34627    0.82071   1.640  0.10108
## demo_race_hispanic1                       0.42095    0.34808   1.209  0.22667
## interview_age                            -0.02196    0.01627  -1.349  0.17744
## PDS_score:accumbens_posvsneg_feedback_z   0.20945    0.24541   0.853  0.39350
##
## (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) =  0.0121
## lmer.REML =  12340  Scale est. = 11.244    n = 2005


##                                             stdcoef        stdse
## X(Intercept)                             0.00000000 0.00000000
## XPDS_score                               0.09184209 0.02383526
## Xaccumbens_posvsneg_feedback_z          -0.04725519 0.05336031
## Xrace.ethnicity.5levelBlack              0.03353625 0.05473619
## Xrace.ethnicity.5levelMixed              0.13741419 0.05401235
## Xrace.ethnicity.5levelOther              0.09659968 0.04034147
## Xrace.ethnicity.5levelWhite              0.11721814 0.07145787
## Xdemo_race_hispanic1                     0.03133133 0.02590731
## Xinterview_age                          -0.03031982 0.02247321
## XPDS_score:accumbens_posvsneg_feedback_z 0.04536103 0.05314860
```

Male participants

```
##
## 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)                         9.718e-01  1.998e+00   0.486 0.626804
## PDS_score                           7.123e-01  2.299e-01   3.098 0.001972
## accumbens_posvsneg_feedback_z       1.674e-02  4.468e-01   0.037 0.970122
## race.ethnicity.5levelBlack          1.244e+00  8.632e-01   1.441 0.149834
## race.ethnicity.5levelMixed          2.849e+00  8.519e-01   3.344 0.000842
## race.ethnicity.5levelOther          2.956e+00  9.815e-01   3.012 0.002628
## race.ethnicity.5levelWhite          2.101e+00  8.012e-01   2.623 0.008790
## demo_race_hispanic1                 7.092e-05  3.327e-01   0.000 0.999830
## interview_age                       5.707e-03  1.562e-02   0.365 0.714890
## PDS_score:accumbens_posvsneg_feedback_z 2.356e-01  3.046e-01   0.774 0.439232
##
## (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) =  0.0113
## lmer.REML =  12294  Scale est. = 18.671    n = 2014


##                                      stdcoef      stdse
## X(Intercept)                         0.000000e+00 0.00000000
## XPDS_score                           7.260536e-02 0.02343254
## Xaccumbens_posvsneg_feedback_z       2.270536e-03 0.06061325
## Xrace.ethnicity.5levelBlack          7.800362e-02 0.05414395
## Xrace.ethnicity.5levelMixed          1.815168e-01 0.05428687
## Xrace.ethnicity.5levelOther          1.174139e-01 0.03898166
## Xrace.ethnicity.5levelWhite          1.877074e-01 0.07157101
## Xdemo_race_hispanic1                 5.467682e-06 0.02565261
## Xinterview_age                       8.278766e-03 0.02265989
## XPDS_score:accumbens_posvsneg_feedback_z 4.694157e-02 0.06067585
```

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

Female participants

```
##
```

```
## 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)                             5.24064    2.08996   2.508   0.0122 *
## PDS_score                               0.70970    0.17965   3.951 8.07e-05 ***
## caudate_posvsneg_feedback_z            -0.42312    0.33771  -1.253   0.2104
## race.ethnicity.5levelBlack              0.54975    0.89324   0.615   0.5383
## race.ethnicity.5levelMixed              2.22349    0.87503   2.541   0.0111 *
## race.ethnicity.5levelOther              2.17874    0.99090   2.199   0.0280 *
## race.ethnicity.5levelWhite              1.27525    0.82348   1.549   0.1216
## demo_race_hispanic1                     0.49242    0.34972   1.408   0.1593
## interview_age                          -0.02506    0.01638  -1.530   0.1263
## PDS_score:caudate_posvsneg_feedback_z   0.15205    0.18800   0.809   0.4187
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.0138
## lmer.REML =  12303  Scale est. = 11.31     n = 1997


##                                        stdcoef        stdse
## X(Intercept)                        0.00000000 0.00000000
## XPDS_score                          0.09443322 0.02390384
## Xcaudate_posvsneg_feedback_z       -0.06710132 0.05355554
## Xrace.ethnicity.5levelBlack         0.03356088 0.05453082
## Xrace.ethnicity.5levelMixed         0.13757834 0.05414223
## Xrace.ethnicity.5levelOther         0.08848400 0.04024316
## Xrace.ethnicity.5levelWhite         0.11053134 0.07137481
## Xdemo_race_hispanic1                0.03652502 0.02594028
## Xinterview_age                     -0.03447507 0.02253990
## XPDS_score:caudate_posvsneg_feedback_z  0.04368556 0.05401517
```

Male participants

```
##
## 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)                           1.660869   2.025202   0.820 0.412256
## PDS_score                             0.796861   0.232639   3.425 0.000626 ***
## caudate_posvsneg_feedback_z          -0.151916   0.356251  -0.426 0.669840
```

```
## race.ethnicity.5levelBlack                  1.121802   0.878802   1.277 0.201922
## race.ethnicity.5levelMixed                  2.796188   0.869009   3.218 0.001313 **
## race.ethnicity.5levelOther                  2.892817   0.994158   2.910 0.003656 **
## race.ethnicity.5levelWhite                  2.070243   0.818202   2.530 0.011475 *
## demo_race_hispanic1                         0.069761   0.335517   0.208 0.835313
## interview_age                              -0.000388   0.015764  -0.025 0.980366
## PDS_score:caudate_posvsneg_feedback_z       0.207350   0.238202   0.870 0.384142
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.0108
## lmer.REML =  12345  Scale est. = 18.427    n = 2016


##                                             stdcoef        stdse
## X(Intercept)                            0.000000000  0.00000000
## XPDS_score                              0.080420355  0.02347821
## Xcaudate_posvsneg_feedback_z           -0.025476897  0.05974461
## Xrace.ethnicity.5levelBlack             0.070193320  0.05498835
## Xrace.ethnicity.5levelMixed             0.176489565  0.05485002
## Xrace.ethnicity.5levelOther             0.115012321  0.03952564
## Xrace.ethnicity.5levelWhite             0.183604445  0.07256417
## Xdemo_race_hispanic1                    0.005342790  0.02569638
## Xinterview_age                         -0.000557737  0.02266052
## XPDS_score:caudate_posvsneg_feedback_z  0.052004275  0.05974202
```

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

Female participants

```
##
## 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)                      4.86580    2.08450   2.334 0.019680 *
## PDS_score                        0.67167    0.17939   3.744 0.000186 ***
## putamen_posvsneg_feedback_z      0.04503    0.35173   0.128 0.898143
## race.ethnicity.5levelBlack       0.63545    0.89359   0.711 0.477091
## race.ethnicity.5levelMixed       2.29627    0.87490   2.625 0.008742 **
## race.ethnicity.5levelOther       2.27889    0.99332   2.294 0.021882 *
## race.ethnicity.5levelWhite       1.32205    0.82379   1.605 0.108689
## demo_race_hispanic1              0.51174    0.34948   1.464 0.143267
## interview_age                   -0.02187    0.01634  -1.338 0.181011
## PDS_score:putamen_posvsneg_feedback_z -0.08259  0.19310  -0.428 0.668914
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
```

```
##
## R-sq.(adj) =  0.0131
## lmer.REML =  12299  Scale est. = 11.345    n = 1996


##                                       stdcoef        stdse
## X(Intercept)                       0.00000000 0.00000000
## XPDS_score                         0.08956683 0.02392100
## Xputamen_posvsneg_feedback_z       0.00678795 0.05302087
## Xrace.ethnicity.5levelBlack        0.03880078 0.05456262
## Xrace.ethnicity.5levelMixed        0.14234404 0.05423465
## Xrace.ethnicity.5levelOther        0.09170833 0.03997370
## Xrace.ethnicity.5levelWhite        0.11455641 0.07138204
## Xdemo_race_hispanic1               0.03792995 0.02590293
## Xinterview_age                    -0.03010194 0.02249573
## XPDS_score:putamen_posvsneg_feedback_z -0.02279752 0.05330223
```

Male participants

```
##
## 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)                 1.360166   2.020508   0.673 0.500910
## PDS_score                   0.762492   0.232428   3.281 0.001054 **
## putamen_posvsneg_feedback_z -0.309543   0.362742  -0.853 0.393572
## race.ethnicity.5levelBlack  1.160402   0.872609   1.330 0.183733
## race.ethnicity.5levelMixed  2.857744   0.862177   3.315 0.000934 ***
## race.ethnicity.5levelOther  2.924746   0.990420   2.953 0.003183 **
## race.ethnicity.5levelWhite  2.152726   0.811334   2.653 0.008033 **
## demo_race_hispanic1         0.006837   0.337189   0.020 0.983825
## interview_age               0.002033   0.015773   0.129 0.897473
## PDS_score:putamen_posvsneg_feedback_z 0.332882 0.244131 1.364 0.172866
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.0108
## lmer.REML =  12387  Scale est. = 18.667    n = 2021


##                                       stdcoef        stdse
## X(Intercept)                       0.0000000000 0.00000000
## XPDS_score                         0.0768104463 0.02341388
## Xputamen_posvsneg_feedback_z      -0.0515747401 0.06043866
## Xrace.ethnicity.5levelBlack        0.0723038142 0.05437164
## Xrace.ethnicity.5levelMixed        0.1799263971 0.05428355
## Xrace.ethnicity.5levelOther        0.1157805167 0.03920727
## Xrace.ethnicity.5levelWhite        0.1903577875 0.07174331
```

```
## Xdemo_race_hispanic1                      0.0005209947 0.02569557
## Xinterview_age                            0.0029171056 0.02263603
## XPDS_score:putamen_posvsneg_feedback_z  0.0823487608 0.06039344
```

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

Female participants

```
##
## 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)                      4.92052    2.08082   2.365 0.018140 *
## PDS_score                        0.68518    0.17862   3.836 0.000129 ***
## lOFC_posvsneg_feedback_z        -0.67670    0.57385  -1.179 0.238452
## race.ethnicity.5levelBlack       0.54472    0.88932   0.613 0.540267
## race.ethnicity.5levelMixed       2.21866    0.87231   2.543 0.011052 *
## race.ethnicity.5levelOther       2.47787    0.99339   2.494 0.012699 *
## race.ethnicity.5levelWhite       1.30039    0.82024   1.585 0.113041
## demo_race_hispanic1              0.41769    0.34743   1.202 0.229419
## interview_age                   -0.02219    0.01632  -1.360 0.173911
## PDS_score:lOFC_posvsneg_feedback_z  0.26950    0.31121   0.866 0.386604
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.0134
## lmer.REML =  12272  Scale est. = 11.19     n = 1994


##                                          stdcoef       stdse
## X(Intercept)                          0.00000000 0.00000000
## XPDS_score                            0.09169905 0.02390497
## XlOFC_posvsneg_feedback_z            -0.06300960 0.05343331
## Xrace.ethnicity.5levelBlack           0.03338588 0.05450613
## Xrace.ethnicity.5levelMixed           0.13713763 0.05391830
## Xrace.ethnicity.5levelOther           0.09961996 0.03993810
## Xrace.ethnicity.5levelWhite           0.11286173 0.07118942
## Xdemo_race_hispanic1                  0.03110200 0.02587032
## Xinterview_age                       -0.03063505 0.02252191
## XPDS_score:lOFC_posvsneg_feedback_z  0.04618863 0.05333658
```

Male participants

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

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```
## 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)                     0.979028   1.996429   0.490 0.623912
## PDS_score                       0.708560   0.231559   3.060 0.002243 **
## lOFC_posvsneg_feedback_z       -0.261914   0.565936  -0.463 0.643560
## race.ethnicity.5levelBlack      1.172783   0.864706   1.356 0.175163
## race.ethnicity.5levelMixed      2.822926   0.853873   3.306 0.000963 ***
## race.ethnicity.5levelOther      2.744911   0.984921   2.787 0.005371 **
## race.ethnicity.5levelWhite      2.056512   0.803007   2.561 0.010509 *
## demo_race_hispanic1            -0.003833   0.333298  -0.011 0.990826
## interview_age                   0.006351   0.015611   0.407 0.684169
## PDS_score:lOFC_posvsneg_feedback_z  0.220286   0.383386   0.575 0.565639
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.00927
## lmer.REML =  12349  Scale est. = 17.93     n = 2022


##                                      stdcoef        stdse
## X(Intercept)                     0.000000000 0.00000000
## XPDS_score                       0.072016982 0.02353526
## XlOFC_posvsneg_feedback_z       -0.027977210 0.06045240
## Xrace.ethnicity.5levelBlack      0.073335943 0.05407142
## Xrace.ethnicity.5levelMixed      0.179947249 0.05443009
## Xrace.ethnicity.5levelOther      0.108667074 0.03899162
## Xrace.ethnicity.5levelWhite      0.183412227 0.07161702
## Xdemo_race_hispanic1            -0.000295504 0.02569613
## Xinterview_age                   0.009221725 0.02266674
## XPDS_score:lOFC_posvsneg_feedback_z  0.034719661 0.06042611
```

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

Female participants

```
##
## 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)                      5.04965    2.08298   2.424  0.01543 *
```

```
## PDS_score                           0.68950    0.17888    3.855  0.00012 ***
## mOFC_posvsneg_feedback_z           -0.69715    0.48406   -1.440  0.14996
## race.ethnicity.5levelBlack          0.53721    0.89106    0.603  0.54665
## race.ethnicity.5levelMixed          2.19349    0.87432    2.509  0.01219 *
## race.ethnicity.5levelOther          2.30312    0.98997    2.326  0.02009 *
## race.ethnicity.5levelWhite          1.28148    0.82167    1.560  0.11901
## demo_race_hispanic1                 0.46194    0.34777    1.328  0.18423
## interview_age                      -0.02318    0.01634   -1.419  0.15610
## PDS_score:mOFC_posvsneg_feedback_z  0.30275    0.26566    1.140  0.25459
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.0142
## lmer.REML =  12281  Scale est. = 11.435    n = 1994


##                                        stdcoef       stdse
## X(Intercept)                        0.00000000  0.00000000
## XPDS_score                          0.09205752  0.02388247
## XmOFC_posvsneg_feedback_z          -0.07972625  0.05535673
## Xrace.ethnicity.5levelBlack         0.03274690  0.05431612
## Xrace.ethnicity.5levelMixed         0.13531019  0.05393443
## Xrace.ethnicity.5levelOther         0.09372436  0.04028628
## Xrace.ethnicity.5levelWhite         0.11104141  0.07119834
## Xdemo_race_hispanic1                0.03439118  0.02589090
## Xinterview_age                     -0.03189948  0.02248257
## XPDS_score:mOFC_posvsneg_feedback_z 0.06357237  0.05578438
```

Male participants

```
##
## 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)                         1.034110   1.995537   0.518 0.604368
## PDS_score                           0.710784   0.231505   3.070 0.002167 **
## mOFC_posvsneg_feedback_z           -0.063667   0.507003  -0.126 0.900081
## race.ethnicity.5levelBlack          1.166348   0.864096   1.350 0.177235
## race.ethnicity.5levelMixed          2.840113   0.853678   3.327 0.000894 ***
## race.ethnicity.5levelOther          2.804023   0.982024   2.855 0.004343 **
## race.ethnicity.5levelWhite          2.063742   0.802717   2.571 0.010213 *
## demo_race_hispanic1                -0.021981   0.332877  -0.066 0.947358
## interview_age                       0.005773   0.015597   0.370 0.711295
## PDS_score:mOFC_posvsneg_feedback_z  0.249767   0.350278   0.713 0.475896
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
```

```
##
## R-sq.(adj) =  0.0109
## lmer.REML =  12337  Scale est. = 18.041    n = 2020


##                                         stdcoef        stdse
## X(Intercept)                        0.000000000 0.00000000
## XPDS_score                          0.072171105 0.02350639
## XmOFC_posvsneg_feedback_z          -0.007832675 0.06237454
## Xrace.ethnicity.5levelBlack         0.073046046 0.05411659
## Xrace.ethnicity.5levelMixed         0.180997361 0.05440397
## Xrace.ethnicity.5levelOther         0.111577504 0.03907663
## Xrace.ethnicity.5levelWhite         0.184144957 0.07162534
## Xdemo_race_hispanic1               -0.001694137 0.02565583
## Xinterview_age                      0.008376781 0.02262955
## XPDS_score:mOFC_posvsneg_feedback_z 0.044479181 0.06237857
```

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

Female participants

```
##
## 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)               2.191763   2.099766   1.044  0.29667
## PDS_score                 1.574106   0.551603   2.854  0.00436 **
## bisbas_ss_basm_rr         0.114562   0.111110   1.031  0.30260
## race.ethnicity.5levelBlack 0.201260  0.791776   0.254  0.79937
## race.ethnicity.5levelMixed 1.868473  0.787599   2.372  0.01775 *
## race.ethnicity.5levelOther 2.513910  0.901229   2.789  0.00532 **
## race.ethnicity.5levelWhite 1.340999  0.740403   1.811  0.07023 .
## demo_race_hispanic1       0.164739   0.316995   0.520  0.60332
## interview_age            -0.004925   0.014590  -0.338  0.73572
## PDS_score:bisbas_ss_basm_rr -0.107740 0.059762  -1.803  0.07153 .
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.0132
## lmer.REML =  16324  Scale est. = 13.08     n = 2629


##                                  stdcoef        stdse
## X(Intercept)                 0.000000000 0.00000000
## XPDS_score                   0.209729583 0.07349406
## Xbisbas_ss_basm_rr           0.048498991 0.04703765
## Xrace.ethnicity.5levelBlack  0.013141938 0.05170153
## Xrace.ethnicity.5levelMixed  0.113552923 0.04786484
```

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```
## Xrace.ethnicity.5levelOther    0.096398587 0.03455859
## Xrace.ethnicity.5levelWhite    0.116005473 0.06404984
## Xdemo_race_hispanic1           0.011826552 0.02275701
## Xinterview_age               -0.006689046 0.01981553
## XPDS_score:bisbas_ss_basm_rr -0.156103576 0.08658904
```

Male participants

```
##
## 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)               4.7054447  2.0835699   2.258  0.02400 *
## PDS_score                -0.8591754  0.7894309  -1.088  0.27653
## bisbas_ss_basm_rr        -0.2496975  0.1188097  -2.102  0.03567 *
## race.ethnicity.5levelBlack 1.2625240 0.7536578   1.675  0.09401 .
## race.ethnicity.5levelMixed 1.9860475 0.7540626   2.634  0.00849 **
## race.ethnicity.5levelOther 1.8136662 0.8608544   2.107  0.03522 *
## race.ethnicity.5levelWhite 1.4414378 0.7070615   2.039  0.04158 *
## demo_race_hispanic1       0.2551682  0.3009364   0.848  0.39656
## interview_age            -0.0006594  0.0140091  -0.047  0.96246
## PDS_score:bisbas_ss_basm_rr 0.1846776 0.0826003   2.236  0.02544 *
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.00837
## lmer.REML =  17688  Scale est. = 16.104    n = 2842
```

```
##                              stdcoef       stdse
## X(Intercept)               0.0000000000 0.00000000
## XPDS_score                -0.0853246230 0.07839830
## Xbisbas_ss_basm_rr        -0.1046016374 0.04977100
## Xrace.ethnicity.5levelBlack 0.0810062817 0.04835632
## Xrace.ethnicity.5levelMixed 0.1179676691 0.04478997
## Xrace.ethnicity.5levelOther 0.0709013952 0.03365326
## Xrace.ethnicity.5levelWhite 0.1239926276 0.06082150
## Xdemo_race_hispanic1       0.0184226382 0.02172701
## Xinterview_age            -0.0008981279 0.01908140
## XPDS_score:bisbas_ss_basm_rr 0.2074705366 0.09279489
```

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

Female participants

```
##
```

```
## 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)                    5.501431   1.992806   2.761  0.00582 **
## PDS_score                      0.641948   0.172915   3.713  0.00021 ***
## rt_diff_large_neutral_z        0.154591   0.311300   0.497  0.61952
## race.ethnicity.5levelBlack     0.560716   0.845384   0.663  0.50723
## race.ethnicity.5levelMixed     2.155255   0.833294   2.586  0.00976 **
## race.ethnicity.5levelOther     2.598824   0.947143   2.744  0.00612 **
## race.ethnicity.5levelWhite     1.320738   0.781113   1.691  0.09101 .
## demo_race_hispanic1            0.456433   0.341115   1.338  0.18102
## interview_age                 -0.026474   0.015690  -1.687  0.09170 .
## PDS_score:rt_diff_large_neutral_z -0.008308 0.171353  -0.048  0.96133
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.0132
## lmer.REML =  13258  Scale est. = 11.823    n = 2153


##                                   stdcoef      stdse
## X(Intercept)                   0.000000000 0.00000000
## XPDS_score                     0.085432620 0.02301209
## Xrt_diff_large_neutral_z       0.026457754 0.05327813
## Xrace.ethnicity.5levelBlack    0.035027385 0.05281032
## Xrace.ethnicity.5levelMixed    0.131975792 0.05102624
## Xrace.ethnicity.5levelOther    0.104261170 0.03799806
## Xrace.ethnicity.5levelWhite    0.114828644 0.06791216
## Xdemo_race_hispanic1           0.033597952 0.02510939
## Xinterview_age                -0.036666351 0.02173111
## XPDS_score:rt_diff_large_neutral_z -0.002595203 0.05352500
```

Male participants

```
##
## 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)                    1.468491   1.936596   0.758  0.44836
## PDS_score                      0.622357   0.221670   2.808  0.00503 **
## rt_diff_large_neutral_z        0.615672   0.346277   1.778  0.07554 .
```

```
## race.ethnicity.5levelBlack              0.747830   0.844881    0.885   0.37618
## race.ethnicity.5levelMixed              2.159276   0.837486    2.578   0.00999 **
## race.ethnicity.5levelOther              1.993475   0.961808    2.073   0.03832 *
## race.ethnicity.5levelWhite              1.472352   0.790394    1.863   0.06262 .
## demo_race_hispanic1                     0.097591   0.322937    0.302   0.76253
## interview_age                           0.008204   0.015067    0.544   0.58618
## PDS_score:rt_diff_large_neutral_z      -0.391427   0.240096   -1.630   0.10318
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.00718
## lmer.REML =  13840  Scale est. = 17.748    n = 2251


##                                        stdcoef        stdse
## X(Intercept)                        0.000000000 0.00000000
## XPDS_score                          0.062424145 0.02223409
## Xrt_diff_large_neutral_z            0.102340818 0.05756040
## Xrace.ethnicity.5levelBlack         0.047305062 0.05344412
## Xrace.ethnicity.5levelMixed         0.136588098 0.05297635
## Xrace.ethnicity.5levelOther         0.078885051 0.03806030
## Xrace.ethnicity.5levelWhite         0.130288521 0.06994200
## Xdemo_race_hispanic1                0.007341529 0.02429389
## Xinterview_age                      0.011689322 0.02146953
## XPDS_score:rt_diff_large_neutral_z -0.093733703 0.05749496
```

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

Female participants

```
##
## 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)                   5.41837    1.99084   2.722 0.006548 **
## PDS_score                     0.62952    0.17249   3.650 0.000269 ***
## rt_diff_large_small_z        -0.54788    0.29956  -1.829 0.067547 .
## race.ethnicity.5levelBlack    0.56487    0.84371   0.670 0.503246
## race.ethnicity.5levelMixed    2.14230    0.83251   2.573 0.010140 *
## race.ethnicity.5levelOther    2.55705    0.94673   2.701 0.006969 **
## race.ethnicity.5levelWhite    1.29990    0.78025   1.666 0.095859 .
## demo_race_hispanic1           0.45983    0.34088   1.349 0.177498
## interview_age                -0.02539    0.01567  -1.621 0.105253
## PDS_score:rt_diff_large_small_z 0.25827  0.16476   1.568 0.117134
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

```
##
##
## R-sq.(adj) =  0.0143
## lmer.REML =  13256  Scale est. = 11.79     n = 2153


##                                  stdcoef        stdse
## X(Intercept)                  0.00000000 0.00000000
## XPDS_score                    0.08377894 0.02295527
## Xrt_diff_large_small_z       -0.09440033 0.05161478
## Xrace.ethnicity.5levelBlack   0.03528668 0.05270563
## Xrace.ethnicity.5levelMixed   0.13118268 0.05097799
## Xrace.ethnicity.5levelOther   0.10258523 0.03798156
## Xrace.ethnicity.5levelWhite   0.11301707 0.06783728
## Xdemo_race_hispanic1          0.03384796 0.02509224
## Xinterview_age               -0.03516595 0.02169951
## XPDS_score:rt_diff_large_small_z  0.08112913 0.05175544
```

Male participants

```
##
## 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)                  1.495433   1.937391   0.772  0.44027
## PDS_score                    0.625956   0.221517   2.826  0.00476 **
## rt_diff_large_small_z        0.112502   0.346367   0.325  0.74536
## race.ethnicity.5levelBlack   0.702795   0.844996   0.832  0.40566
## race.ethnicity.5levelMixed   2.106456   0.837600   2.515  0.01198 *
## race.ethnicity.5levelOther   1.868262   0.960621   1.945  0.05192 .
## race.ethnicity.5levelWhite   1.410928   0.790353   1.785  0.07437 .
## demo_race_hispanic1          0.094464   0.323247   0.292  0.77013
## interview_age                0.008503   0.015075   0.564  0.57278
## PDS_score:rt_diff_large_small_z -0.142787   0.241824  -0.590  0.55494
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
##
## R-sq.(adj) =  0.00581
## lmer.REML =  13842  Scale est. = 17.609    n = 2251


##                                  stdcoef        stdse
## X(Intercept)                  0.000000000 0.00000000
## XPDS_score                    0.062785201 0.02221882
## Xrt_diff_large_small_z        0.018914894 0.05823430
## Xrace.ethnicity.5levelBlack   0.044456297 0.05345140
## Xrace.ethnicity.5levelMixed   0.133246850 0.05298360
## Xrace.ethnicity.5levelOther   0.073930194 0.03801336
```

```
## Xrace.ethnicity.5levelWhite          0.124853059 0.06993836
## Xdemo_race_hispanic1                  0.007106301 0.02431718
## Xinterview_age                        0.012115652 0.02148020
## XPDS_score:rt_diff_large_small_z -0.034405634 0.05826948
```

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

Female participants

```
##
## 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)                             4.460740   2.119085   2.105 0.035422
## PDS_score                               0.665395   0.191155   3.481 0.000511
## hormone_scr_ert_mean                    0.002798   0.008101   0.345 0.729815
## accumbens_rvsn_ant_z                    0.182512   0.418879   0.436 0.663094
## race.ethnicity.5levelBlack              0.220171   0.899271   0.245 0.806613
## race.ethnicity.5levelMixed              2.173556   0.878765   2.473 0.013471
## race.ethnicity.5levelOther              2.237816   0.998934   2.240 0.025195
## race.ethnicity.5levelWhite              1.325853   0.823882   1.609 0.107726
## demo_race_hispanic1                     0.355402   0.358674   0.991 0.321874
## interview_age                          -0.018447   0.016899  -1.092 0.275143
## hormone_scr_ert_mean:accumbens_rvsn_ant_z -0.006376   0.011134  -0.573 0.566914
##
## (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) =  0.0115
## lmer.REML =  11518  Scale est. = 10.565    n = 1870


##                                          stdcoef      stdse
## X(Intercept)                          0.000000000 0.00000000
```

```
## XPDS_score                                  0.088048832 0.02529474
## Xhormone_scr_ert_mean                        0.008367511 0.02422393
## Xaccumbens_rvsn_ant_z                        0.022981740 0.05274494
## Xrace.ethnicity.5levelBlack                  0.013159110 0.05374735
## Xrace.ethnicity.5levelMixed                  0.135545710 0.05480091
## Xrace.ethnicity.5levelOther                  0.091880743 0.04101443
## Xrace.ethnicity.5levelWhite                  0.115032704 0.07148108
## Xdemo_race_hispanic1                         0.026450768 0.02669426
## Xinterview_age                              -0.025633451 0.02348207
## Xhormone_scr_ert_mean:accumbens_rvsn_ant_z  -0.030085404 0.05253210
```

Male participants

```
##
## 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)                            0.826356   2.106340   0.392  0.69487
## PDS_score                              0.807336   0.248609   3.247  0.00119
## hormone_scr_ert_mean                  -0.001599   0.008291  -0.193  0.84712
## accumbens_rvsn_ant_z                  -0.226384   0.363241  -0.623  0.53321
## race.ethnicity.5levelBlack             1.015589   0.917880   1.106  0.26868
## race.ethnicity.5levelMixed             2.778456   0.902439   3.079  0.00211
## race.ethnicity.5levelOther             2.730933   1.035962   2.636  0.00846
## race.ethnicity.5levelWhite             2.072912   0.848688   2.442  0.01468
## demo_race_hispanic1                    0.093889   0.347187   0.270  0.78686
## interview_age                          0.007195   0.016674   0.431  0.66618
## hormone_scr_ert_mean:accumbens_rvsn_ant_z  0.003889   0.010802   0.360  0.71890
##
## (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) =  0.00997
## lmer.REML =  11479  Scale est. = 18.675    n = 1866
```

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```
##                                               stdcoef       stdse
## X(Intercept)                             0.000000000 0.00000000
## XPDS_score                               0.080086034 0.02466148
## Xhormone_scr_ert_mean                   -0.004656018 0.02414640
## Xaccumbens_rvsn_ant_z                   -0.031496666 0.05053762
## Xrace.ethnicity.5levelBlack              0.061964362 0.05600285
## Xrace.ethnicity.5levelMixed              0.174432269 0.05665535
## Xrace.ethnicity.5levelOther              0.107339563 0.04071859
## Xrace.ethnicity.5levelWhite              0.181614492 0.07435632
## Xdemo_race_hispanic1                     0.007153489 0.02645243
## Xinterview_age                           0.010256443 0.02377085
## Xhormone_scr_ert_mean:accumbens_rvsn_ant_z  0.018217382 0.05060633
```

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

Female participants

```
##
## 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)                        4.5348882  2.1219447   2.137 0.032717
## PDS_score                          0.6845890  0.1914868   3.575 0.000359
## hormone_scr_ert_mean               0.0028676  0.0081083   0.354 0.723629
## caudate_rvsn_ant_z                -0.0035717  0.3299659  -0.011 0.991365
## race.ethnicity.5levelBlack         0.2633481  0.8995029   0.293 0.769730
## race.ethnicity.5levelMixed         2.1525889  0.8777123   2.452 0.014278
## race.ethnicity.5levelOther         2.2184539  0.9953510   2.229 0.025945
## race.ethnicity.5levelWhite         1.3332409  0.8235547   1.619 0.105642
## demo_race_hispanic1                0.3429821  0.3576367   0.959 0.337672
## interview_age                     -0.0193397  0.0169371  -1.142 0.253662
## hormone_scr_ert_mean:caudate_rvsn_ant_z  0.0001989  0.0087533   0.023 0.981875
##
## (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) =  0.0113
## lmer.REML =  11506  Scale est. = 10.618    n = 1868


##                                             stdcoef        stdse
## X(Intercept)                           0.0000000000 0.00000000
## XPDS_score                             0.0904617420 0.02530311
## Xhormone_scr_ert_mean                  0.0085822122 0.02426639
## Xcaudate_rvsn_ant_z                   -0.0005902608 0.05453016
## Xrace.ethnicity.5levelBlack            0.0156609707 0.05349228
## Xrace.ethnicity.5levelMixed            0.1348256129 0.05497478
## Xrace.ethnicity.5levelOther            0.0916153870 0.04110496
## Xrace.ethnicity.5levelWhite            0.1157573234 0.07150432
## Xdemo_race_hispanic1                   0.0255479878 0.02663958
## Xinterview_age                        -0.0268625946 0.02352540
## Xhormone_scr_ert_mean:caudate_rvsn_ant_z  0.0012411632 0.05462655
```

Male participants

```
##
## 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)                       1.090318   2.116933   0.515 0.606582
## PDS_score                         0.820521   0.248605   3.300 0.000983
## hormone_scr_ert_mean             -0.001400   0.008342  -0.168 0.866760
## caudate_rvsn_ant_z                0.207941   0.288077   0.722 0.470495
## race.ethnicity.5levelBlack        0.905254   0.938982   0.964 0.335132
## race.ethnicity.5levelMixed        2.714709   0.924768   2.936 0.003371
## race.ethnicity.5levelOther        2.652355   1.053709   2.517 0.011914
## race.ethnicity.5levelWhite        1.977938   0.872654   2.267 0.023531
## demo_race_hispanic1               0.094266   0.349284   0.270 0.787280
## interview_age                     0.005727   0.016720   0.343 0.732003
## hormone_scr_ert_mean:caudate_rvsn_ant_z -0.009114   0.008086  -1.127 0.259871
##
## (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) =  0.0103
## lmer.REML =  11473  Scale est. = 18.944    n = 1864


##                                               stdcoef      stdse
## X(Intercept)                              0.000000000 0.00000000
## XPDS_score                                0.081249074 0.02461724
## Xhormone_scr_ert_mean                    -0.004063508 0.02421654
## Xcaudate_rvsn_ant_z                       0.037011233 0.05127471
## Xrace.ethnicity.5levelBlack               0.055283898 0.05734370
## Xrace.ethnicity.5levelMixed               0.169939493 0.05789003
## Xrace.ethnicity.5levelOther               0.104735783 0.04160869
## Xrace.ethnicity.5levelWhite               0.173000734 0.07632682
## Xdemo_race_hispanic1                      0.007145795 0.02647729
## Xinterview_age                            0.008150815 0.02379699
## Xhormone_scr_ert_mean:caudate_rvsn_ant_z -0.057746001 0.05123680
```

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

Female participants

```
##
## 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)                               4.341820   2.117114   2.051 0.040425
## PDS_score                                 0.685162   0.191490   3.578 0.000355
## hormone_scr_ert_mean                      0.001752   0.008077   0.217 0.828324
## putamen_rvsn_ant_z                       -0.194659   0.331833  -0.587 0.557532
## race.ethnicity.5levelBlack                0.318982   0.895454   0.356 0.721714
## race.ethnicity.5levelMixed                2.189852   0.874549   2.504 0.012366
## race.ethnicity.5levelOther                2.243043   0.994948   2.254 0.024285
## race.ethnicity.5levelWhite                1.316069   0.820336   1.604 0.108817
## demo_race_hispanic1                       0.361351   0.357142   1.012 0.311772
## interview_age                            -0.017509   0.016893  -1.036 0.300127
## hormone_scr_ert_mean:putamen_rvsn_ant_z   0.004550   0.008692   0.523 0.600715
##
## (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) =  0.0114
## lmer.REML =  11482  Scale est. = 10.569    n = 1866


##                                              stdcoef       stdse
## X(Intercept)                              0.000000000 0.00000000
## XPDS_score                                0.090800903 0.02537719
## Xhormone_scr_ert_mean                     0.005262216 0.02426301
## Xputamen_rvsn_ant_z                      -0.031273105 0.05331090
## Xrace.ethnicity.5levelBlack               0.019075586 0.05354945
## Xrace.ethnicity.5levelMixed               0.137414357 0.05487842
## Xrace.ethnicity.5levelOther               0.092518827 0.04103862
## Xrace.ethnicity.5levelWhite               0.114607647 0.07143754
## Xdemo_race_hispanic1                      0.027011425 0.02669677
## Xinterview_age                           -0.024416110 0.02355743
## Xhormone_scr_ert_mean:putamen_rvsn_ant_z  0.027821247 0.05314857
```

Male participants

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) 0.950507 2.111716 0.450 0.652683

PDS_score 0.835710 0.249503 3.349 0.000826

hormone_scr_ert_mean -0.001234 0.008330 -0.148 0.882222

putamen_rvsn_ant_z 0.358346 0.285470 1.255 0.209533

race.ethnicity.5levelBlack 0.938358 0.937376 1.001 0.316935

race.ethnicity.5levelMixed 2.714538 0.920851 2.948 0.003240

race.ethnicity.5levelOther 2.456016 1.055552 2.327 0.020085

race.ethnicity.5levelWhite 1.963689 0.870617 2.256 0.024217

demo_race_hispanic1 0.055634 0.348600 0.160 0.873220

interview_age 0.006910 0.016685 0.414 0.678820

hormone_scr_ert_mean:putamen_rvsn_ant_z   -0.014910   0.007825   -1.906
0.056869

(Intercept)

PDS_score ***

hormone_scr_ert_mean

putamen_rvsn_ant_z

race.ethnicity.5levelBlack

stdcoef stdse

X(Intercept) 0.000000000 0.00000000

XPDS__score 0.082371181 0.02459214

Xhormone__scr__ert__mean -0.003584990 0.02419450

Xputamen__rvsn__ant__z 0.063156589 0.05031251

Xrace.ethnicity.5levelBlack 0.057199532 0.05713969

Xrace.ethnicity.5levelMixed 0.171840499 0.05829332

Xrace.ethnicity.5levelOther 0.096091091 0.04129823

Xrace.ethnicity.5levelWhite 0.172199089 0.07634584

Xdemo__race__hispanic1 0.004221928 0.02645460

Xinterview__age 0.009853074 0.02379169

Xhormone__scr__ert__mean:putamen__rvsn__ant__z -0.095896161 0.05032583

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

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) 4.189255 2.110672 1.985

PDS_score 0.677795 0.190161 3.564

hormone_scr_ert_mean 0.002331 0.008078 0.289

accumbens_posvsneg_feedback_z 0.319909 0.465170 0.688

race.ethnicity.5levelBlack 0.284555 0.894195 0.318

race.ethnicity.5levelMixed 2.101703 0.874015 2.405

race.ethnicity.5levelOther 2.296337 0.991434 2.316

race.ethnicity.5levelWhite 1.361645 0.820086 1.660

demo_race_hispanic1 0.271252 0.357796 0.758

interview_age -0.016437 0.016839 -0.976

hormone_scr_ert_mean:accumbens_posvsneg_feedback_z -0.010360 0.012227 -0.847

Pr(>|t|)

(Intercept) 0.047314 *

PDS_score 0.000374 ***

hormone_scr_ert_mean 0.772937

accumbens_posvsneg_feedback_z 0.491712

race.ethnicity.5levelBlack 0.750350

stdcoef stdse

X(Intercept) 0.000000000 0.00000000

XPDS_score 0.090167889 0.02529740

Xhormone_scr_ert_mean 0.006997497 0.02424821

Xaccumbens_posvsneg_feedback_z 0.037588859 0.05465681

Xrace.ethnicity.5levelBlack 0.017149749 0.05389191

Xrace.ethnicity.5levelMixed 0.132108077 0.05493854

Xrace.ethnicity.5levelOther 0.095615174 0.04128145

Xrace.ethnicity.5levelWhite 0.118997652 0.07166940

Xdemo_race_hispanic1 0.020239798 0.02669737

Xinterview_age -0.022931083 0.02349276

Xhormone_scr_ert_mean:accumbens_posvsneg_feedback_z   -0.046304621
0.05464837

Male participants

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) 0.658559 2.091251 0.315

PDS_score 0.769057 0.246289 3.123

hormone_scr_ert_mean -0.002729 0.008376 -0.326

accumbens_posvsneg_feedback_z 0.304347 0.375976 0.809

race.ethnicity.5levelBlack 1.124960 0.909945 1.236

race.ethnicity.5levelMixed 2.837777 0.892904 3.178

race.ethnicity.5levelOther 2.905780 1.025407 2.834

race.ethnicity.5levelWhite 2.089149 0.840017 2.487

demo_race_hispanic1 0.063400 0.345254 0.184

interview_age 0.008688 0.016568 0.524

hormone_scr_ert_mean:accumbens_posvsneg_feedback_z 0.001418 0.010581 0.134

Pr(>|t|)

(Intercept) 0.75286

PDS_score 0.00182 **

hormone_scr_ert_mean 0.74457

accumbens_posvsneg_feedback_z 0.41834

race.ethnicity.5levelBlack 0.21651

stdcoef stdse

X(Intercept) 0.000000000 0.00000000

XPDS__score 0.076885588 0.02462248

Xhormone__scr__ert__mean -0.007995204 0.02453590

Xaccumbens__posvsneg__feedback__z 0.041184918 0.05087796

Xrace.ethnicity.5levelBlack 0.068884609 0.05571865

Xrace.ethnicity.5levelMixed 0.179539583 0.05649196

Xrace.ethnicity.5levelOther 0.115321880 0.04069538

Xrace.ethnicity.5levelWhite 0.184381166 0.07413704

Xdemo__race__hispanic1 0.004856984 0.02644958

Xinterview__age 0.012474363 0.02378765

Xhormone__scr__ert__mean:accumbens__posvsneg__feedback__z   0.006843802
0.05105107

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

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) 4.554e+00 2.125e+00 2.143

PDS_score 7.006e-01 1.917e-01 3.656

hormone_scr_ert_mean 2.420e-03 8.112e-03 0.298

caudate_posvsneg_feedback_z -1.997e-01 3.265e-01 -0.612

race.ethnicity.5levelBlack 2.948e-01 8.991e-01 0.328

race.ethnicity.5levelMixed 2.101e+00 8.768e-01 2.396

race.ethnicity.5levelOther 2.103e+00 9.960e-01 2.112

race.ethnicity.5levelWhite 1.291e+00 8.229e-01 1.569

demo_race_hispanic1 3.428e-01 3.598e-01 0.953

interview_age -1.950e-02 1.697e-02 -1.149

hormone_scr_ert_mean:caudate_posvsneg_feedback_z -8.056e-06 8.468e-03 -0.001

Pr(>|t|)

(Intercept) 0.032269 *

PDS_score 0.000264 ***

hormone_scr_ert_mean 0.765486

caudate_posvsneg_feedback_z 0.540722

race.ethnicity.5levelBlack 0.743000

stdcoef stdse

X(Intercept) 0.000000e+00 0.00000000

XPDS_score 9.263388e-02 0.02534069

Xhormone_scr_ert_mean 7.251566e-03 0.02430729

Xcaudate_posvsneg_feedback_z -3.193048e-02 0.05218801

Xrace.ethnicity.5levelBlack 1.758754e-02 0.05363161

Xrace.ethnicity.5levelMixed 1.319344e-01 0.05506927

Xrace.ethnicity.5levelOther 8.696694e-02 0.04117999

Xrace.ethnicity.5levelWhite 1.122973e-01 0.07156246

Xdemo_race_hispanic1 2.548609e-02 0.02674784

Xinterview_age -2.709446e-02 0.02357562

Xhormone_scr_ert_mean:caudate_posvsneg_feedback_z   -4.981198e-05 0.05235506

```
### Male participants
```

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) 1.3883336 2.1190745 0.655

PDS_score 0.8436839 0.2489426 3.389

hormone_scr_ert_mean -0.0004785 0.0083682 -0.057

caudate_posvsneg_feedback_z 0.0385882 0.3254904 0.119

race.ethnicity.5levelBlack 1.0010979 0.9272429 1.080

race.ethnicity.5levelMixed 2.7672791 0.9117289 3.035

race.ethnicity.5levelOther 2.7627825 1.0407302 2.655

race.ethnicity.5levelWhite 2.0558581 0.8586835 2.394

demo_race_hispanic1 0.1363458 0.3485672 0.391

interview_age 0.0018276 0.0167146 0.109

hormone_scr_ert_mean:caudate_posvsneg_feedback_z 0.0037076 0.0092531 0.401

Pr(>|t|)

(Intercept) 0.512446

PDS_score 0.000716 ***

hormone_scr_ert_mean 0.954412

caudate_posvsneg_feedback_z 0.905642

race.ethnicity.5levelBlack 0.280439

stdcoef stdse

X(Intercept) 0.000000000 0.00000000

XPDS_score 0.083449931 0.02462325

Xhormone_scr_ert_mean -0.001390307 0.02431675

Xcaudate_posvsneg_feedback_z 0.006366573 0.05370187

Xrace.ethnicity.5levelBlack 0.061180869 0.05666731

Xrace.ethnicity.5levelMixed 0.173354353 0.05711465

Xrace.ethnicity.5levelOther 0.109174442 0.04112562

Xrace.ethnicity.5levelWhite 0.180030947 0.07519468

Xdemo_race_hispanic1 0.010363679 0.02649469

Xinterview_age 0.002600489 0.02378302

Xhormone_scr_ert_mean:caudate_posvsneg_feedback_z 0.021559629 0.05380679

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

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) 4.287337 2.120112 2.022

PDS_score 0.674074 0.191044 3.528

hormone_scr_ert_mean 0.002856 0.008144 0.351

putamen_posvsneg_feedback_z -0.057460 0.364195 -0.158

race.ethnicity.5levelBlack 0.353506 0.899655 0.393

race.ethnicity.5levelMixed 2.143254 0.876523 2.445

race.ethnicity.5levelOther 2.180848 0.997524 2.186

race.ethnicity.5levelWhite 1.325057 0.823209 1.610

demo_race_hispanic1 0.360481 0.359323 1.003

interview_age -0.017350 0.016925 -1.025

hormone_scr_ert_mean:putamen_posvsneg_feedback_z -0.003165 0.009367 -0.338

Pr(>|t|)

(Intercept) 0.043297 *

PDS_score 0.000428 ***

hormone_scr_ert_mean 0.725826

putamen_posvsneg_feedback_z 0.874653

race.ethnicity.5levelBlack 0.694413

stdcoef stdse

X(Intercept) 0.000000000 0.00000000

XPDS_score 0.089424969 0.02534449

Xhormone_scr_ert_mean 0.008533937 0.02433147

Xputamen_posvsneg_feedback_z -0.008689526 0.05507630

Xrace.ethnicity.5levelBlack 0.021092081 0.05367831

Xrace.ethnicity.5levelMixed 0.134877786 0.05516076

Xrace.ethnicity.5levelOther 0.089750821 0.04105219

Xrace.ethnicity.5levelWhite 0.115262984 0.07160866

Xdemo_race_hispanic1 0.026804630 0.02671849

Xinterview_age -0.024123053 0.02353253

Xhormone_scr_ert_mean:putamen_posvsneg_feedback_z -0.018618912 0.05510494

Male participants

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) 0.9678945 2.1150864 0.458

PDS_score 0.8206911 0.2491162 3.294

hormone_scr_ert_mean 0.0001559 0.0083903 0.019

putamen_posvsneg_feedback_z 0.3279395 0.3259022 1.006

race.ethnicity.5levelBlack 1.0351830 0.9199736 1.125

race.ethnicity.5levelMixed 2.8187987 0.9041222 3.118

race.ethnicity.5levelOther 2.8285173 1.0349923 2.733

race.ethnicity.5levelWhite 2.1215584 0.8509597 2.493

demo_race_hispanic1 0.0681918 0.3505186 0.195

interview_age 0.0050743 0.0167195 0.303

hormone_scr_ert_mean:putamen_posvsneg_feedback_z -0.0049790 0.0091813 -0.542

$Pr(>|t|)$

(Intercept) 0.64728

PDS_score 0.00100 **

hormone_scr_ert_mean 0.98517

putamen_posvsneg_feedback_z 0.31443

race.ethnicity.5levelBlack 0.26064

stdcoef stdse

X(Intercept) 0.0000000000 0.00000000

XPDS__score 0.0810367444 0.02459825

Xhormone__scr__ert__mean 0.0004519792 0.02431881

Xputamen__posvsneg__feedback__z 0.0536290875 0.05329591

Xrace.ethnicity.5levelBlack 0.0629716317 0.05596328

Xrace.ethnicity.5levelMixed 0.1760914006 0.05648085

Xrace.ethnicity.5levelOther 0.1118613343 0.04093156

Xrace.ethnicity.5levelWhite 0.1852841829 0.07431771

Xdemo__race__hispanic1 0.0051603085 0.02652497

Xinterview__age 0.0072033788 0.02373469

Xhormone__scr__ert__mean:putamen__posvsneg__feedback__z   -0.0289168505
0.05332263

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

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) 4.386035 2.139491 2.050 0.040501 *

PDS_score 0.658410 0.191838 3.432 0.000612 ***

hormone_scr_ert_mean 0.003086 0.008159 0.378 0.705274

lOFC_rvsn_ant_z 0.330589 0.491379 0.673 0.501172

race.ethnicity.5levelBlack 0.227744 0.906920 0.251 0.801751

race.ethnicity.5levelMixed 2.115228 0.887612 2.383 0.017270 *

race.ethnicity.5levelOther 2.179843 1.007403 2.164 0.030605 *

race.ethnicity.5levelWhite 1.276544 0.832855 1.533 0.125512

demo_race_hispanic1 0.358385 0.359093 0.998 0.318396

interview_age -0.017460 0.017050 -1.024 0.305924

hormone_scr_ert_mean:lOFC_rvsn_ant_z -0.007097 0.012725 -0.558 0.577086

—

Signif. codes: 0 '' *0.001* '' *0.01* '' 0.05 '.' 0.1 '' 1

R-sq.(adj) = 0.0109

lmer.REML = 11483 Scale est. = 10.83 n = 1864

stdcoef stdse

X(Intercept) 0.000000000 0.00000000

XPDS__score 0.087218772 0.02541257

Xhormone__scr__ert__mean 0.009225083 0.02438763

XlOFC__rvsn__ant__z 0.034944355 0.05194040

Xrace.ethnicity.5levelBlack 0.013630564 0.05427961

Xrace.ethnicity.5levelMixed 0.132116587 0.05544004

Xrace.ethnicity.5levelOther 0.090248343 0.04170778

Xrace.ethnicity.5levelWhite 0.110969448 0.07239970

Xdemo__race__hispanic1 0.026757077 0.02680994

Xinterview__age -0.024258921 0.02368814

Xhormone__scr__ert__mean:lOFC__rvsn__ant__z -0.028954334 0.05191328

Male participants

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) 0.150908 2.087223 0.072 0.94237

PDS_score 0.735069 0.248610 2.957 0.00315 **

hormone_scr_ert_mean -0.003581 0.008285 -0.432 0.66566

lOFC_rvsn_ant_z 0.318482 0.425928 0.748 0.45472

race.ethnicity.5levelBlack 0.995449 0.908689 1.095 0.27345

race.ethnicity.5levelMixed 2.714104 0.892622 3.041 0.00239 **

race.ethnicity.5levelOther 2.660468 1.024339 2.597 0.00947 **

race.ethnicity.5levelWhite 1.971262 0.838789 2.350 0.01887 *

demo_race_hispanic1 -0.018859 0.345314 -0.055 0.95645

interview_age 0.014731 0.016549 0.890 0.37349

hormone_scr_ert_mean:lOFC_rvsn_ant_z -0.011844 0.012319 -0.962 0.33642

—

Signif. codes: 0 '' *0.001* '' *0.01* '' 0.05 ':' 0.1 ' ' 1

R-sq.(adj) = 0.0088

lmer.REML = 11420 Scale est. = 18.159 n = 1863

stdcoef stdse

X(Intercept) 0.000000000 0.00000000

XPDS__score 0.073113645 0.02472805

Xhormone__scr__ert__mean -0.010454089 0.02418883

XlOFC__rvsn__ant__z 0.037501635 0.05015365

Xrace.ethnicity.5levelBlack 0.061069392 0.05574683

Xrace.ethnicity.5levelMixed 0.171722959 0.05647675

Xrace.ethnicity.5levelOther 0.105783195 0.04072886

Xrace.ethnicity.5levelWhite 0.174235445 0.07413867

Xdemo__race__hispanic1 -0.001449026 0.02653155

Xinterview__age 0.021210017 0.02382701

Xhormone__scr__ert__mean:lOFC__rvsn__ant__z -0.048290370 0.05022375


```
## 4.21 Model: CBCL internalizing factor ~ Testosterone x Medial OFC activity (anticipation stage) + PD:
### Female participants
```

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) 4.202280 2.132609 1.970 0.048931 *

PDS_score 0.676571 0.191614 3.531 0.000424 ***

hormone_scr_ert_mean 0.002583 0.008127 0.318 0.750694

mOFC_rvsn_ant_z 0.063317 0.437193 0.145 0.884864

race.ethnicity.5levelBlack 0.216029 0.906342 0.238 0.811634

race.ethnicity.5levelMixed 2.115741 0.887454 2.384 0.017223 *

race.ethnicity.5levelOther 2.218632 1.008524 2.200 0.027938 *

race.ethnicity.5levelWhite 1.295692 0.832708 1.556 0.119879

demo_race_hispanic1 0.351711 0.358836 0.980 0.327142

interview_age -0.016049 0.016989 -0.945 0.344951

hormone_scr_ert_mean:mOFC_rvsn_ant_z 0.002991 0.011334 0.264 0.791898

—

Signif. codes: 0 '' *0.001* '' *0.01* '' 0.05 '.' 0.1 ' ' 1

R-sq.(adj) = 0.0115

lmer.REML = 11480 Scale est. = 10.572 n = 1864

stdcoef stdse

X(Intercept) 0.000000000 0.00000000

XPDS_score 0.089377321 0.02531284

Xhormone_scr_ert_mean 0.007704058 0.02424402

XmOFC_rvsn_ant_z 0.007732696 0.05339312

Xrace.ethnicity.5levelBlack 0.012931400 0.05425325

Xrace.ethnicity.5levelMixed 0.131909474 0.05532983

Xrace.ethnicity.5levelOther 0.091244834 0.04147718

Xrace.ethnicity.5levelWhite 0.112430130 0.07225597

Xdemo_race_hispanic1 0.026185470 0.02671589

Xinterview_age -0.022263668 0.02356767

Xhormone_scr_ert_mean:mOFC_rvsn_ant_z 0.014123809 0.05352261

Male participants

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) 0.3832360 2.0976904 0.183 0.85506

PDS_score 0.7451921 0.2484437 2.999 0.00274 **

hormone_scr_ert_mean -0.0048427 0.0082810 -0.585 0.55876

mOFC_rvsn_ant_z 0.2130617 0.3870717 0.550 0.58208

race.ethnicity.5levelBlack 1.0194439 0.9127620 1.117 0.26419

race.ethnicity.5levelMixed 2.6588881 0.8961882 2.967 0.00305 **

race.ethnicity.5levelOther 2.6485499 1.0260213 2.581 0.00992 **

race.ethnicity.5levelWhite 1.9814512 0.8424593 2.352 0.01878 *

demo_race_hispanic1 0.0445607 0.3461643 0.129 0.89759

interview_age 0.0129518 0.0166157 0.779 0.43579

hormone_scr_ert_mean:mOFC_rvsn_ant_z   -0.0001119   0.0109075   -0.010
0.99182

—

Signif. codes: 0 '' *0.001* '' *0.01* '' 0.05 '' 0.1 ' ' 1

R-sq.(adj) = 0.0096

lmer.REML = 11397 Scale est. = 18.344 n = 1857

stdcoef stdse

X(Intercept) 0.0000000000 0.00000000

XPDS_score 0.0741649416 0.02472626

Xhormone_scr_ert_mean -0.0141767364 0.02424212

XmOFC_rvsn_ant_z 0.0273278189 0.04964676

Xrace.ethnicity.5levelBlack 0.0621167897 0.05561644

Xrace.ethnicity.5levelMixed 0.1677608905 0.05654443

Xrace.ethnicity.5levelOther 0.1056256681 0.04091831

Xrace.ethnicity.5levelWhite 0.1744784954 0.07418353

Xdemo_race_hispanic1 0.0034169889 0.02654445

Xinterview_age 0.0185909553 0.02385014

Xhormone_scr_ert_mean:mOFC_rvsn_ant_z -0.0005086038 0.04957859

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

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) 4.334290 2.117637 2.047

PDS_score 0.673271 0.190513 3.534

hormone_scr_ert_mean 0.001130 0.008091 0.140

lOFC_posvsneg_feedback_z 0.550378 0.567460 0.970

race.ethnicity.5levelBlack 0.298496 0.894428 0.334

race.ethnicity.5levelMixed 2.147933 0.873735 2.458

race.ethnicity.5levelOther 2.515196 0.999082 2.518

race.ethnicity.5levelWhite 1.364823 0.819389 1.666

demo_race_hispanic1 0.238185 0.357406 0.666

interview_age -0.017253 0.016901 -1.021

hormone_scr_ert_mean:lOFC_posvsneg_feedback_z   -0.019692   0.014952
-1.317

Pr(>|t|)

(Intercept) 0.040823 *

PDS_score 0.000419 ***

hormone_scr_ert_mean 0.888980

lOFC_posvsneg_feedback_z 0.332224[154]

race.ethnicity.5levelBlack 0.738622

stdcoef stdse

X(Intercept) 0.000000000 0.00000000

XPDS_score 0.089530985 0.02533420

Xhormone_scr_ert_mean 0.003392483 0.02429891

XlOFC_posvsneg_feedback_z 0.051315582 0.05290828

Xrace.ethnicity.5levelBlack 0.017930105 0.05372656

Xrace.ethnicity.5levelMixed 0.134618193 0.05475990

Xrace.ethnicity.5levelOther 0.102781970 0.04082687

Xrace.ethnicity.5levelWhite 0.118852302 0.07135454

Xdemo_race_hispanic1 0.017760349 0.02665016

Xinterview_age -0.024044745 0.02355472

Xhormone_scr_ert_mean:lOFC_posvsneg_feedback_z -0.069808143 0.05300648

Male participants

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) 0.714685 2.088512 0.342

PDS_score 0.783974 0.246780 3.177

hormone_scr_ert_mean -0.003902 0.008305 -0.470

lOFC_posvsneg_feedback_z 0.077362 0.470889 0.164

race.ethnicity.5levelBlack 1.077394 0.910723 1.183

race.ethnicity.5levelMixed 2.805075 0.893849 3.138

race.ethnicity.5levelOther 2.628287 1.029908 2.552

race.ethnicity.5levelWhite 2.036011 0.840929 2.421

demo_race_hispanic1 0.054593 0.346160 0.158

interview_age 0.009083 0.016537 0.549

hormone_scr_ert_mean:lOFC_posvsneg_feedback_z 0.001431 0.013061 0.110

Pr(>|t|)

(Intercept) 0.73224

PDS_score 0.00151 **

hormone_scr_ert_mean 0.63848

lOFC_posvsneg_feedback_z 0.86952

race.ethnicity.5levelBlack 0.23696

race.ethnicity.5levelMixed 0.00173 **

stdcoef stdse

X(Intercept) 0.000000000 0.00000000

XPDS__score 0.078132761 0.02459470

Xhormone__scr__ert__mean -0.011391423 0.02424239

XlOFC__posvsneg__feedback__z 0.008171791 0.04974011

Xrace.ethnicity.5levelBlack 0.065904541 0.05570922

Xrace.ethnicity.5levelMixed 0.177587855 0.05658912

Xrace.ethnicity.5levelOther 0.103380522 0.04051021

Xrace.ethnicity.5levelWhite 0.179456733 0.07412056

Xdemo__race__hispanic1 0.004179204 0.02649933

Xinterview__age 0.013060368 0.02377935

Xhormone__scr__ert__mean:lOFC__posvsneg__feedback__z 0.005459776 0.04983746

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

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) 4.369334 2.116941 2.064

PDS_score 0.684020 0.190714 3.587

hormone_scr_ert_mean 0.002015 0.008095 0.249

mOFC_posvsneg_feedback_z 0.562287 0.484833 1.160

race.ethnicity.5levelBlack 0.271402 0.896065 0.303

race.ethnicity.5levelMixed 2.143308 0.874392 2.451

race.ethnicity.5levelOther 2.290652 0.993534 2.306

race.ethnicity.5levelWhite 1.335606 0.819977 1.629

demo_race_hispanic1 0.315052 0.357365 0.882

interview_age -0.017840 0.016903 -1.055

hormone_scr_ert_mean:mOFC_posvsneg_feedback_z   -0.019533   0.012998
-1.503

Pr(>|t|)

(Intercept) 0.039158 *

PDS_score 0.000344 ***

hormone_scr_ert_mean 0.803458

mOFC_posvsneg_feedback_z 0.246298

race.ethnicity.5levelBlack 0.762013

stdcoef stdse

X(Intercept) 0.000000000 0.00000000

XPDS_score 0.090846633 0.02532931

Xhormone_scr_ert_mean 0.006043042 0.02427799

XmOFC_posvsneg_feedback_z 0.063887955 0.05508752

Xrace.ethnicity.5levelBlack 0.016222048 0.05355889

Xrace.ethnicity.5levelMixed 0.134192510 0.05474567

Xrace.ethnicity.5levelOther 0.094893539 0.04115858

Xrace.ethnicity.5levelWhite 0.116250283 0.07137022

Xdemo_race_hispanic1 0.023515428 0.02667365

Xinterview_age -0.024822076 0.02351827

Xhormone_scr_ert_mean:mOFC_posvsneg_feedback_z -0.082792073 0.05509320

Male participants

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) 0.705120 2.085170 0.338

PDS_score 0.790538 0.246908 3.202

hormone_scr_ert_mean -0.003745 0.008306 -0.451

mOFC_posvsneg_feedback_z 0.539658 0.420064 1.285

race.ethnicity.5levelBlack 1.043013 0.910260 1.146

race.ethnicity.5levelMixed 2.833043 0.893757 3.170

race.ethnicity.5levelOther 2.681549 1.026752 2.612

race.ethnicity.5levelWhite 2.032990 0.840740 2.418

demo_race_hispanic1 0.026393 0.345459 0.076

interview_age 0.009054 0.016506 0.549

hormone_scr_ert_mean:mOFC_posvsneg_feedback_z   -0.006810   0.012039
-0.566

Pr(>|t|)

(Intercept) 0.73528

PDS_score 0.00139 **

hormone_scr_ert_mean 0.65210

mOFC_posvsneg_feedback_z 0.19906¹⁶⁰

race.ethnicity.5levelBlack 0.25201

stdcoef stdse

X(Intercept) 0.000000000 0.00000000

XPDS__score 0.078701912 0.02458087

Xhormone__scr__ert__mean -0.010959530 0.02430454

XmOFC__posvsneg__feedback__z 0.066266778 0.05158130

Xrace.ethnicity.5levelBlack 0.063912773 0.05577805

Xrace.ethnicity.5levelMixed 0.179312006 0.05656865

Xrace.ethnicity.5levelOther 0.106057369 0.04060885

Xrace.ethnicity.5levelWhite 0.179287802 0.07414423

Xdemo__race__hispanic1 0.002019782 0.02643724

Xinterview__age 0.013009696 0.02371808

Xhormone__scr__ert__mean:mOFC__posvsneg__feedback__z -0.029213472 0.05164401

```
## 4.24 Model: CBCL internalizing factor ~ Testosterone x BIS-BAS RR + PDS
### Female participants
```

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) 3.020293 2.129138 1.419 0.156158

PDS_score 0.626624 0.169756 3.691 0.000228

hormone_scr_ert_mean -0.009565 0.025287 -0.378 0.705274

bisbas_ss_basm_rr -0.084205 0.110618 -0.761 0.446597

race.ethnicity.5levelBlack -0.041861 0.799020 -0.052 0.958222

race.ethnicity.5levelMixed 1.640258 0.791942 2.071 0.038447

race.ethnicity.5levelOther 2.486882 0.909634 2.734 0.006304

race.ethnicity.5levelWhite 1.312543 0.742548 1.768 0.077250

demo_race_hispanic1 0.027915 0.326365 0.086 0.931844

interview_age 0.003614 0.015214 0.238 0.812240

hormone_scr_ert_mean:bisbas_ss_basm_rr 0.001030 0.002812 0.366 0.714173

(Intercept)

PDS_score *

hormone_scr_ert_mean

bisbas_ss_basm_rr

race.ethnicity.5levelBlack

race.ethnicity.5levelMixed *

stdcoef stdse

X(Intercept) 0.000000000 0.00000000

XPDS__score 0.082604510 0.02237807

Xhormone__scr__ert__mean -0.028244945 0.07467170

Xbisbas__ss__basm__rr -0.035672492 0.04686200

Xrace.ethnicity.5levelBlack -0.002670114 0.05096549

Xrace.ethnicity.5levelMixed 0.100690667 0.04861502

Xrace.ethnicity.5levelOther 0.096891536 0.03544029

Xrace.ethnicity.5levelWhite 0.113429746 0.06417085

Xdemo__race__hispanic1 0.002007520 0.02347058

Xinterview__age 0.004948478 0.02083018

Xhormone__scr__ert__mean:bisbas__ss__basm__rr 0.031154003 0.08505036

Male participants

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) 2.9701263 2.1007562 1.414 0.1575

PDS_score 0.9685476 0.2132567 4.542 5.83e-06

hormone_scr_ert_mean -0.0090263 0.0274874 -0.328 0.7427

bisbas_ss_basm_rr -0.0430441 0.1024891 -0.420 0.6745

race.ethnicity.5levelBlack 1.2247139 0.7869171 1.556 0.1197

race.ethnicity.5levelMixed 1.9527447 0.7842227 2.490 0.0128

race.ethnicity.5levelOther 1.6124358 0.9006139 1.790 0.0735

race.ethnicity.5levelWhite 1.4409351 0.7350396 1.960 0.0501

demo_race_hispanic1 0.3099222 0.3134454 0.989 0.3229

interview_age -0.0028410 0.0148925 -0.191 0.8487

hormone_scr_ert_mean:bisbas_ss_basm_rr 0.0009282 0.0029410 0.316 0.7523

(Intercept)

PDS_score *

hormone_scr_ert_mean

bisbas_ss_basm_rr

race.ethnicity.5levelBlack

race.ethnicity.5levelMixed *

stdcoef stdse

X(Intercept) 0.000000000 0.00000000

XPDS__score 0.094152622 0.02073071

Xhormone__scr__ert__mean -0.025137327 0.07654984

Xbisbas__ss__basm__rr -0.017723946 0.04220121

Xrace.ethnicity.5levelBlack 0.077043541 0.04950289

Xrace.ethnicity.5levelMixed 0.115234051 0.04627802

Xrace.ethnicity.5levelOther 0.061744498 0.03448692

Xrace.ethnicity.5levelWhite 0.122274376 0.06237374

Xdemo__race__hispanic1 0.022120273 0.02237174

Xinterview__age -0.003831664 0.02008576

Xhormone__scr__ert__mean:bisbas__ss__basm__rr 0.027179247 0.08611794

```
## 4.25 Model: CBCL internalizing factor ~ Testosterone x MID Reaction Time + PDS (large reward vs. neu
### Female participants
```

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) 4.907584 2.030917 2.416

PDS_score 0.640866 0.184675 3.470

hormone_scr_ert_mean 0.002759 0.007808 0.353

rt_diff_large_neutral_z -0.234714 0.298041 -0.788

race.ethnicity.5levelBlack 0.234371 0.848919 0.276

race.ethnicity.5levelMixed 2.018688 0.835051 2.417

race.ethnicity.5levelOther 2.518939 0.951958 2.646

race.ethnicity.5levelWhite 1.333646 0.780222 1.709

demo_race_hispanic1 0.310120 0.350440 0.885

interview_age -0.021805 0.016262 -1.341

hormone_scr_ert_mean:rt_diff_large_neutral_z 0.010525 0.007542 1.395

Pr(>|t|)

(Intercept) 0.015762 *

PDS_score 0.000531 ***

hormone_scr_ert_mean 0.723886

rt_diff_large_neutral_z 0.431069

race.ethnicity.5levelBlack 0.782514

race.ethnicity.5levelMixed 0.015719 *

stdcoef stdse

X(Intercept) 0.000000000 0.00000000

XPDS__score 0.084660536 0.02439626

Xhormone__scr__ert__mean 0.008240673 0.02332361

Xrt__diff__large__neutral__z -0.040099945 0.05091906

Xrace.ethnicity.5levelBlack 0.014379534 0.05208437

Xrace.ethnicity.5levelMixed 0.125306101 0.05183418

Xrace.ethnicity.5levelOther 0.102723097 0.03882115

Xrace.ethnicity.5levelWhite 0.116282984 0.06802895

Xdemo__race__hispanic1 0.022839216 0.02580865

Xinterview__age -0.030444450 0.02270520

Xhormone__scr__ert__mean:rt__diff__large__neutral__z 0.070724384 0.05068090

Male participants

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) 1.4502677 2.0225524 0.717

PDS_score 0.7057552 0.2370283 2.978

hormone_scr_ert_mean -0.0002715 0.0079566 -0.034

rt_diff_large_neutral_z 0.4957660 0.2919671 1.698

race.ethnicity.5levelBlack 0.6326718 0.8872742 0.713

race.ethnicity.5levelMixed 2.1038840 0.8757925 2.402

race.ethnicity.5levelOther 1.7323746 1.0030273 1.727

race.ethnicity.5levelWhite 1.3926335 0.8266765 1.685

demo_race_hispanic1 0.1495244 0.3362208 0.445

interview_age 0.0083807 0.0159449 0.526

hormone_scr_ert_mean:rt_diff_large_neutral_z -0.0100928 0.0080219 -1.258

Pr(>|t|)

(Intercept) 0.47342

PDS_score 0.00294 *

hormone_scr_ert_mean 0.97278

rt_diff_large_neutral_z 0.08965 .

race.ethnicity.5levelBlack 0.47589

race.ethnicity.5levelMixed 0.01638 *

stdcoef stdse

X(Intercept) 0.0000000000 0.00000000

XPDS_score 0.0691194630 0.02321381

Xhormone_scr_ert_mean -0.0007818428 0.02291272

Xrt_diff_large_neutral_z 0.0812335089 0.04784013

Xrace.ethnicity.5levelBlack 0.0392929450 0.05510537

Xrace.ethnicity.5levelMixed 0.1321383124 0.05500576

Xrace.ethnicity.5levelOther 0.0679076958 0.03931787

Xrace.ethnicity.5levelWhite 0.1218099598 0.07230720

Xdemo_race_hispanic1 0.0111392536 0.02504774

Xinterview_age 0.0118296878 0.02250680

Xhormone_scr_ert_mean:rt_diff_large_neutral_z -0.0601402975 0.04780078

4.26 Model: CBCL internalizing factor ~ Testosterone x MID Reaction Time + PDS (large vs. small rewa
Female participants

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) 4.830633 2.029793 2.380

PDS_score 0.653073 0.184699 3.536

hormone_scr_ert_mean 0.001939 0.007810 0.248

rt_diff_large_small_z -0.398245 0.292018 -1.364

race.ethnicity.5levelBlack 0.219698 0.848951 0.259

race.ethnicity.5levelMixed 2.006919 0.835252 2.403

race.ethnicity.5levelOther 2.487240 0.952491 2.611

race.ethnicity.5levelWhite 1.329151 0.780631 1.703

demo_race_hispanic1 0.281757 0.350482 0.804

interview_age -0.020947 0.016244 -1.289

hormone_scr_ert_mean:rt_diff_large_small_z 0.007626 0.007556 1.009

Pr(>|t|)

(Intercept) 0.017412 *

PDS_score 0.000416 ***

hormone_scr_ert_mean 0.803898

rt_diff_large_small_z 0.172793

race.ethnicity.5levelBlack 0.795825

race.ethnicity.5levelMixed 0.016362 *

stdcoef stdse

X(Intercept) 0.000000000 0.00000000

XPDS_score 0.086273148 0.02439933

Xhormone_scr_ert_mean 0.005793587 0.02332941

Xrt_diff_large_small_z -0.068777079 0.05043159

Xrace.ethnicity.5levelBlack 0.013479336 0.05208638

Xrace.ethnicity.5levelMixed 0.124575534 0.05184659

Xrace.ethnicity.5levelOther 0.101430408 0.03884285

Xrace.ethnicity.5levelWhite 0.115891113 0.06806462

Xdemo_race_hispanic1 0.020750382 0.02581176

Xinterview_age -0.029245957 0.02268009

Xhormone_scr_ert_mean:rt_diff_large_small_z 0.050925567 0.05045846

Male participants

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) 1.5105404 2.0253677 0.746

PDS_score 0.6937632 0.2369733 2.928

hormone_scr_ert_mean -0.0003462 0.0079643 -0.043

rt_diff_large_small_z -0.0119908 0.2898251 -0.041

race.ethnicity.5levelBlack 0.6102166 0.8879027 0.687

race.ethnicity.5levelMixed 2.0562980 0.8760914 2.347

race.ethnicity.5levelOther 1.6642936 1.0033058 1.659

race.ethnicity.5levelWhite 1.3562003 0.8270570 1.640

demo_race_hispanic1 0.1405787 0.3363157 0.418

interview_age 0.0083766 0.0159693 0.525

hormone_scr_ert_mean:rt_diff_large_small_z -0.0016357 0.0082670 -0.198

Pr(>|t|)

(Intercept) 0.45587

PDS_score 0.00345 **

hormone_scr_ert_mean 0.96533

rt_diff_large_small_z 0.96700

race.ethnicity.5levelBlack 0.49200

race.ethnicity.5levelMixed 0.01901 *

stdcoef stdse

X(Intercept) 0.0000000000 0.00000000

XPDS_score 0.0679450047 0.02320843

Xhormone_scr_ert_mean -0.0009970233 0.02293495

Xrt_diff_large_small_z -0.0019734573 0.04769957

Xrace.ethnicity.5levelBlack 0.0378983317 0.05514441

Xrace.ethnicity.5levelMixed 0.1291495884 0.05502454

Xrace.ethnicity.5levelOther 0.0652389737 0.03932878

Xrace.ethnicity.5levelWhite 0.1186232462 0.07234048

Xdemo_race_hispanic1 0.0104728182 0.02505481

Xinterview_age 0.0118238679 0.02254134

Xhormone_scr_ert_mean:rt_diff_large_small_z -0.0094174136 0.04759658

" `

5— Correlation Matrix —

Female participants

x1	x2	N	corr	p
bmi	interview_age	2675	0.0777979236	0.00005626170294
PDS_score	interview_age	2701	0.2397245643	0.00000000000000
PDS_score	bmi	2675	0.2883194569	0.00000000000000
hormone_scr_ert_mean_z	interview_age	2514	0.2111922127	0.00000000000000
hormone_scr_ert_mean_z	bmi	2488	0.2011164615	0.00000000000000
hormone_scr_ert_mean_z	PDS_score	2514	0.3194091104	0.00000000000000
bisbas_ss_basm_rr_z	interview_age	2690	-0.0324228218	0.09270914672114
bisbas_ss_basm_rr_z	bmi	2664	0.0518639980	0.00741845859611
bisbas_ss_basm_rr_z	PDS_score	2690	0.0567567189	0.00323263005375
bisbas_ss_basm_rr_z	hormone_scr_ert_mean_z	2504	-0.0149523266	0.45453109921919
rt_diff_large_neutral_z	interview_age	2229	0.0444337653	0.03593351564518
rt_diff_large_neutral_z	bmi	2206	-0.0079826125	0.70786767361752
rt_diff_large_neutral_z	PDS_score	2229	-0.0029053436	0.89095865956824
rt_diff_large_neutral_z	hormone_scr_ert_mean_z	2088	-0.0216332136	0.32313034241508
rt_diff_large_neutral_z	bisbas_ss_basm_rr_z	2220	-0.0006405387	0.97593690877362
rt_diff_large_small_z	interview_age	2229	0.0219796326	0.29961846451327
rt_diff_large_small_z	bmi	2206	-0.0213846091	0.31540780939492
rt_diff_large_small_z	PDS_score	2229	-0.0170095374	0.42216737250534

x1	x2	N	corr	p
rt_diff_large_small_z	hormone_scr_ert_mean_z	2087	-0.0043284021	0.84334249311512
rt_diff_large_small_z	bisbas_ss_basm_rr_z	2220	-0.0231864210	0.27483168284004
rt_diff_large_small_z	rt_diff_large_neutral_z	2201	0.4179924701	0.00000000000000
cbcl_scr_syn_internal_r	interview_age	2701	0.0011506908	0.95233479027429
cbcl_scr_syn_internal_r	bmi	2675	0.0643351043	0.00087054703099
cbcl_scr_syn_internal_r	PDS_score	2701	0.0576397227	0.00272912600408
cbcl_scr_syn_internal_r	hormone_scr_ert_mean_z	2514	0.0149428266	0.45391772219594
cbcl_scr_syn_internal_r	bisbas_ss_basm_rr_z	2690	-0.0234766912	0.22351849161129
cbcl_scr_syn_internal_r	rt_diff_large_neutral_z	2229	0.0166852282	0.43107074180790
cbcl_scr_syn_internal_r	rt_diff_large_small_z	2229	-0.0216931306	0.30596364272833
accumbens_rvsn_ant_z	interview_age	2237	0.0114048219	0.58979774095617
accumbens_rvsn_ant_z	bmi	2214	-0.0481381380	0.02350742889809
accumbens_rvsn_ant_z	PDS_score	2237	-0.0022709471	0.91451215925587
accumbens_rvsn_ant_z	hormone_scr_ert_mean_z	2090	-0.0393773431	0.07188968575698
accumbens_rvsn_ant_z	bisbas_ss_basm_rr_z	2229	0.0080008151	0.70577908106748
accumbens_rvsn_ant_z	rt_diff_large_neutral_z	2084	0.0168178792	0.44287695646753
accumbens_rvsn_ant_z	rt_diff_large_small_z	2084	0.0278108340	0.20441541659964
accumbens_rvsn_ant_z	cbcl_scr_syn_internal_r	2237	-0.0011046109	0.95835696200010
caudate_rvsn_ant_z	interview_age	2236	0.0219258951	0.30004325750421
caudate_rvsn_ant_z	bmi	2213	-0.0383512800	0.07126491835157
caudate_rvsn_ant_z	PDS_score	2236	-0.0398572505	0.05951099252948
caudate_rvsn_ant_z	hormone_scr_ert_mean_z	2088	-0.0281662362	0.19825798097841
caudate_rvsn_ant_z	bisbas_ss_basm_rr_z	2228	-0.0060577944	0.77504638139374
caudate_rvsn_ant_z	rt_diff_large_neutral_z	2080	0.0235573317	0.28287521125039
caudate_rvsn_ant_z	rt_diff_large_small_z	2079	0.0303883236	0.16602979724595
caudate_rvsn_ant_z	cbcl_scr_syn_internal_r	2236	-0.0001264905	0.99523032935205
caudate_rvsn_ant_z	accumbens_rvsn_ant_z	2220	0.5792092513	0.00000000000000
putamen_rvsn_ant_z	interview_age	2232	0.0244479138	0.24827723868069
putamen_rvsn_ant_z	bmi	2209	-0.0416045359	0.05056502376294
putamen_rvsn_ant_z	PDS_score	2232	-0.0601145918	0.00449673509563
putamen_rvsn_ant_z	hormone_scr_ert_mean_z	2085	-0.0240042818	0.27326293836512
putamen_rvsn_ant_z	bisbas_ss_basm_rr_z	2224	-0.0131102287	0.53660946224109
putamen_rvsn_ant_z	rt_diff_large_neutral_z	2077	0.0499082533	0.02293157373042
putamen_rvsn_ant_z	rt_diff_large_small_z	2076	0.0429202276	0.05054723967104
putamen_rvsn_ant_z	cbcl_scr_syn_internal_r	2232	-0.0111745491	0.59774112699753
putamen_rvsn_ant_z	accumbens_rvsn_ant_z	2217	0.5211930815	0.00000000000000
putamen_rvsn_ant_z	caudate_rvsn_ant_z	2222	0.7924723553	0.00000000000000
mOFC_rvsn_ant_z	interview_age	2232	-0.0032585523	0.87771904452209
mOFC_rvsn_ant_z	bmi	2209	0.0097322978	0.64754891953160
mOFC_rvsn_ant_z	PDS_score	2232	0.0125397817	0.55376926292284
mOFC_rvsn_ant_z	hormone_scr_ert_mean_z	2083	-0.0097813355	0.65548035587513
mOFC_rvsn_ant_z	bisbas_ss_basm_rr_z	2224	0.0250930956	0.23685120157890
mOFC_rvsn_ant_z	rt_diff_large_neutral_z	2078	-0.0290937517	0.18493121340454
mOFC_rvsn_ant_z	rt_diff_large_small_z	2077	-0.0431167742	0.04944438498104
mOFC_rvsn_ant_z	cbcl_scr_syn_internal_r	2232	0.0179774938	0.39592448004348
mOFC_rvsn_ant_z	accumbens_rvsn_ant_z	2214	0.4036844310	0.00000000000000
mOFC_rvsn_ant_z	caudate_rvsn_ant_z	2212	0.3283875636	0.00000000000000
mOFC_rvsn_ant_z	putamen_rvsn_ant_z	2208	0.2865406556	0.00000000000000
lOFC_rvsn_ant_z	interview_age	2231	-0.0063722804	0.76355233506547
lOFC_rvsn_ant_z	bmi	2208	-0.0019274549	0.92787505975737
lOFC_rvsn_ant_z	PDS_score	2231	0.0026000006	0.90231424428102
lOFC_rvsn_ant_z	hormone_scr_ert_mean_z	2083	-0.0337687073	0.12338628130715

x1	x2	N	corr	p
lOFC_rvsn_ant_z	bisbas_ss_basm_rr_z	2223	0.0074046540	0.72714318497904
lOFC_rvsn_ant_z	rt_diff_large_neutral_z	2077	-0.0056085971	0.79837170766625
lOFC_rvsn_ant_z	rt_diff_large_small_z	2076	-0.0012764029	0.95365151111183
lOFC_rvsn_ant_z	cbcl_scr_syn_internal_r	2231	-0.0046776260	0.82523425870186
lOFC_rvsn_ant_z	accumbens_rvsn_ant_z	2214	0.4401350271	0.00000000000000
lOFC_rvsn_ant_z	caudate_rvsn_ant_z	2212	0.4793290375	0.00000000000000
lOFC_rvsn_ant_z	putamen_rvsn_ant_z	2209	0.4141113084	0.00000000000000
lOFC_rvsn_ant_z	mOFC_rvsn_ant_z	2225	0.6979074075	0.00000000000000
accumbens_posvsneg_feedback_z	interview_age	2240	-0.0439274147	0.03762951130008
accumbens_posvsneg_feedback_z	bmi	2218	0.0041359448	0.84564657943600
accumbens_posvsneg_feedback_z	PDS_score	2240	0.0005671738	0.97859645454026
accumbens_posvsneg_feedback_z	hormone_scr_ert_mean_z	2091	0.0008261805	0.96988179068912
accumbens_posvsneg_feedback_z	bisbas_ss_basm_rr_z	2232	-0.0048122622	0.82024902155453
accumbens_posvsneg_feedback_z	rt_diff_large_neutral_z	2088	-0.0128498899	0.55730868992721
accumbens_posvsneg_feedback_z	rt_diff_large_small_z	2087	-0.0193232755	0.37760803948972
accumbens_posvsneg_feedback_z	cbcl_scr_syn_internal_r	2240	-0.0062604085	0.76712765486295
accumbens_posvsneg_feedback_z	accumbens_rvsn_ant_z	2224	0.0187833723	0.37594584945531
accumbens_posvsneg_feedback_z	caudate_rvsn_ant_z	2220	0.0354231508	0.09519432959757
accumbens_posvsneg_feedback_z	putamen_rvsn_ant_z	2216	0.0138838004	0.51360516157393
accumbens_posvsneg_feedback_z	mOFC_rvsn_ant_z	2216	0.0469620159	0.02705789917398
accumbens_posvsneg_feedback_z	lOFC_rvsn_ant_z	2215	0.0651276864	0.00216449440103
caudate_posvsneg_feedback_z	interview_age	2237	-0.0624293129	0.00313738556372
caudate_posvsneg_feedback_z	bmi	2214	-0.0258938416	0.22326074558019
caudate_posvsneg_feedback_z	PDS_score	2237	-0.0171865748	0.41651742475225
caudate_posvsneg_feedback_z	hormone_scr_ert_mean_z	2087	0.0277612683	0.20489730952979
caudate_posvsneg_feedback_z	bisbas_ss_basm_rr_z	2229	-0.0125067494	0.55508063612405
caudate_posvsneg_feedback_z	rt_diff_large_neutral_z	2081	-0.0025858979	0.90615263142336
caudate_posvsneg_feedback_z	rt_diff_large_small_z	2081	-0.0496823690	0.02342401838852
caudate_posvsneg_feedback_z	cbcl_scr_syn_internal_r	2237	-0.0327020388	0.12204293955260
caudate_posvsneg_feedback_z	accumbens_rvsn_ant_z	2217	0.0109112415	0.60761443151020
caudate_posvsneg_feedback_z	caudate_rvsn_ant_z	2218	0.0500011498	0.01852359698307
caudate_posvsneg_feedback_z	putamen_rvsn_ant_z	2214	0.0193424297	0.36298412722074
caudate_posvsneg_feedback_z	mOFC_rvsn_ant_z	2214	0.0427009844	0.04453735151281
caudate_posvsneg_feedback_z	lOFC_rvsn_ant_z	2213	0.0565401180	0.00780442095677
caudate_posvsneg_feedback_z	accumbens_posvsneg_feedback_z	2223	0.5776932564	0.00000000000000
putamen_posvsneg_feedback_z	interview_age	2232	-0.0501643212	0.01778182260171
putamen_posvsneg_feedback_z	bmi	2209	-0.0267587642	0.20869021580191
putamen_posvsneg_feedback_z	PDS_score	2232	0.0088883042	0.67471008791774
putamen_posvsneg_feedback_z	hormone_scr_ert_mean_z	2083	0.0535673119	0.01448141829232
putamen_posvsneg_feedback_z	bisbas_ss_basm_rr_z	2224	0.0013832567	0.94801732305712
putamen_posvsneg_feedback_z	rt_diff_large_neutral_z	2079	-0.0222948924	0.30959415096150
putamen_posvsneg_feedback_z	rt_diff_large_small_z	2079	-0.0192391404	0.38060482996662
putamen_posvsneg_feedback_z	cbcl_scr_syn_internal_r	2232	-0.0204899270	0.33325097948708
putamen_posvsneg_feedback_z	accumbens_rvsn_ant_z	2213	0.0239228220	0.26062492397226
putamen_posvsneg_feedback_z	caudate_rvsn_ant_z	2213	0.0173590051	0.41437906245703
putamen_posvsneg_feedback_z	putamen_rvsn_ant_z	2209	0.0151223460	0.47746319831753
putamen_posvsneg_feedback_z	mOFC_rvsn_ant_z	2207	0.0449275784	0.03481445031123
putamen_posvsneg_feedback_z	lOFC_rvsn_ant_z	2206	0.0376385873	0.07715519789341
putamen_posvsneg_feedback_z	accumbens_posvsneg_feedback_z	2219	0.4988937668	0.00000000000000
putamen_posvsneg_feedback_z	caudate_posvsneg_feedback_z	2226	0.7859132063	0.00000000000000
mOFC_posvsneg_feedback_z	interview_age	2233	0.0009025856	0.96599849233225
mOFC_posvsneg_feedback_z	bmi	2210	0.0070109550	0.74184804469529

x1	x2	N	corr	p
mOFC_posvsneg_feedback_z	PDS_score	2233	0.0174067488	0.41099086046438
mOFC_posvsneg_feedback_z	hormone_scr_ert_mean_z	2087	0.0202073553	0.35616992745668
mOFC_posvsneg_feedback_z	bisbas_ss_basm_rr_z	2225	-0.0215685367	0.30918557958494
mOFC_posvsneg_feedback_z	rt_diff_large_neutral_z	2078	-0.0336738104	0.12489807463776
mOFC_posvsneg_feedback_z	rt_diff_large_small_z	2077	-0.0348602302	0.11222971342929
mOFC_posvsneg_feedback_z	cbcl_scr_syn_internal_r	2233	-0.0340738697	0.10746032394908
mOFC_posvsneg_feedback_z	accumbens_rvsn_ant_z	2214	0.0360001810	0.09035755034341
mOFC_posvsneg_feedback_z	caudate_rvsn_ant_z	2213	0.0602885114	0.00455249508912
mOFC_posvsneg_feedback_z	putamen_rvsn_ant_z	2208	0.0464456336	0.02908057643774
mOFC_posvsneg_feedback_z	mOFC_rvsn_ant_z	2214	0.1020174649	0.00000150864333
mOFC_posvsneg_feedback_z	lOFC_rvsn_ant_z	2213	0.1166663805	0.00000003712997
mOFC_posvsneg_feedback_z	accumbens_posvsneg_feedback_z	2220	0.3956436855	0.00000000000000
mOFC_posvsneg_feedback_z	caudate_posvsneg_feedback_z	2217	0.3847746451	0.00000000000000
mOFC_posvsneg_feedback_z	putamen_posvsneg_feedback_z	2211	0.3278457191	0.00000000000000
lOFC_posvsneg_feedback_z	interview_age	2231	-0.0359114404	0.08992034601295
lOFC_posvsneg_feedback_z	bmi	2208	-0.0018263526	0.93164876419271
lOFC_posvsneg_feedback_z	PDS_score	2231	0.0192429563	0.36362140673184
lOFC_posvsneg_feedback_z	hormone_scr_ert_mean_z	2084	0.0264330252	0.22774932751358
lOFC_posvsneg_feedback_z	bisbas_ss_basm_rr_z	2223	-0.0139088115	0.51218112550251
lOFC_posvsneg_feedback_z	rt_diff_large_neutral_z	2077	-0.0351556798	0.10921762938385
lOFC_posvsneg_feedback_z	rt_diff_large_small_z	2076	-0.0503817475	0.02169726995095
lOFC_posvsneg_feedback_z	cbcl_scr_syn_internal_r	2231	-0.0214132092	0.31203122082317
lOFC_posvsneg_feedback_z	accumbens_rvsn_ant_z	2214	0.0263886385	0.21453786418193
lOFC_posvsneg_feedback_z	caudate_rvsn_ant_z	2210	0.0129932259	0.54153063080608
lOFC_posvsneg_feedback_z	putamen_rvsn_ant_z	2208	0.0061290751	0.77346849878171
lOFC_posvsneg_feedback_z	mOFC_rvsn_ant_z	2213	0.0836444437	0.00008164192865
lOFC_posvsneg_feedback_z	lOFC_rvsn_ant_z	2215	0.0833204825	0.00008637309012
lOFC_posvsneg_feedback_z	accumbens_posvsneg_feedback_z	2217	0.4616425845	0.00000000000000
lOFC_posvsneg_feedback_z	caudate_posvsneg_feedback_z	2214	0.5196435569	0.00000000000000
lOFC_posvsneg_feedback_z	putamen_posvsneg_feedback_z	2208	0.4433337959	0.00000000000000
lOFC_posvsneg_feedback_z	mOFC_posvsneg_feedback_z	2223	0.7294825686	0.00000000000000

Male participants

x1	x2	N	corr	p
bmi	interview_age	2901	0.0918986783	0.0000007118236
PDS_score	interview_age	2925	0.1705305535	0.0000000000000
PDS_score	bmi	2901	0.2000023565	0.0000000000000
hormone_scr_ert_mean_z	interview_age	2720	0.1664953530	0.0000000000000
hormone_scr_ert_mean_z	bmi	2697	0.1947537609	0.0000000000000
hormone_scr_ert_mean_z	PDS_score	2720	0.1808497235	0.0000000000000
bisbas_ss_basm_rr_z	interview_age	2908	-0.0112575120	0.5439641273850
bisbas_ss_basm_rr_z	bmi	2884	0.0733765181	0.0000800868703
bisbas_ss_basm_rr_z	PDS_score	2908	0.0549633689	0.0030276683565
bisbas_ss_basm_rr_z	hormone_scr_ert_mean_z	2703	0.0384223603	0.0457810099012
rt_diff_large_neutral_z	interview_age	2317	-0.0125248599	0.5467846238585
rt_diff_large_neutral_z	bmi	2303	-0.0043610748	0.8343127747883
rt_diff_large_neutral_z	PDS_score	2317	-0.0435115439	0.0362332963381
rt_diff_large_neutral_z	hormone_scr_ert_mean_z	2153	-0.0151380839	0.4826505237757
rt_diff_large_neutral_z	bisbas_ss_basm_rr_z	2308	-0.0149974799	0.4714302803412

x1	x2	N	corr	p
rt_diff_large_small_z	interview_age	2327	-0.0051579972	0.8036048138750
rt_diff_large_small_z	bmi	2313	0.0073378533	0.7242997169935
rt_diff_large_small_z	PDS_score	2327	-0.0174964117	0.3988816266765
rt_diff_large_small_z	hormone_scr_ert_mean_z	2165	-0.0255918733	0.2339340575978
rt_diff_large_small_z	bisbas_ss_basm_rr_z	2318	-0.0046769321	0.8219376295062
rt_diff_large_small_z	rt_diff_large_neutral_z	2297	0.3765420553	0.0000000000000
cbcl_scr_syn_internal_r	interview_age	2925	0.0046982056	0.7995055144624
cbcl_scr_syn_internal_r	bmi	2901	0.0671462371	0.0002956464790
cbcl_scr_syn_internal_r	PDS_score	2925	0.0737304746	0.0000657082592
cbcl_scr_syn_internal_r	hormone_scr_ert_mean_z	2720	0.0028892677	0.8802779940469
cbcl_scr_syn_internal_r	bisbas_ss_basm_rr_z	2908	0.0063440301	0.7323781880132
cbcl_scr_syn_internal_r	rt_diff_large_neutral_z	2317	0.0030708133	0.8825520064098
cbcl_scr_syn_internal_r	rt_diff_large_small_z	2327	-0.0085058265	0.6817330193853
accumbens_rvsn_ant_z	interview_age	2334	-0.0222598818	0.2823903366529
accumbens_rvsn_ant_z	bmi	2319	-0.0241546628	0.2449373017172
accumbens_rvsn_ant_z	PDS_score	2334	-0.0050367610	0.8078468897401
accumbens_rvsn_ant_z	hormone_scr_ert_mean_z	2163	-0.0085922236	0.6896102373768
accumbens_rvsn_ant_z	bisbas_ss_basm_rr_z	2322	-0.0310751306	0.1343993142486
accumbens_rvsn_ant_z	rt_diff_large_neutral_z	2136	-0.0271739486	0.2093365727565
accumbens_rvsn_ant_z	rt_diff_large_small_z	2145	-0.0148592024	0.4915610579548
accumbens_rvsn_ant_z	cbcl_scr_syn_internal_r	2334	-0.0277065434	0.1808689939010
caudate_rvsn_ant_z	interview_age	2335	0.0125379417	0.5448097811537
caudate_rvsn_ant_z	bmi	2321	-0.0235785001	0.2561735798566
caudate_rvsn_ant_z	PDS_score	2335	-0.0120627715	0.5601596680241
caudate_rvsn_ant_z	hormone_scr_ert_mean_z	2163	-0.0009235512	0.9657591228348
caudate_rvsn_ant_z	bisbas_ss_basm_rr_z	2323	-0.0136291044	0.5114601245295
caudate_rvsn_ant_z	rt_diff_large_neutral_z	2135	0.0035885457	0.8683804663115
caudate_rvsn_ant_z	rt_diff_large_small_z	2143	0.0027205694	0.8998357470434
caudate_rvsn_ant_z	cbcl_scr_syn_internal_r	2335	-0.0094961720	0.6464947816140
caudate_rvsn_ant_z	accumbens_rvsn_ant_z	2306	0.5963711143	0.0000000000000
putamen_rvsn_ant_z	interview_age	2336	0.0303725159	0.1422338747573
putamen_rvsn_ant_z	bmi	2321	-0.0378703566	0.0681305325944
putamen_rvsn_ant_z	PDS_score	2336	0.0084909641	0.6816778890089
putamen_rvsn_ant_z	hormone_scr_ert_mean_z	2163	0.0172838342	0.4217244997837
putamen_rvsn_ant_z	bisbas_ss_basm_rr_z	2324	-0.0089881147	0.6649612903899
putamen_rvsn_ant_z	rt_diff_large_neutral_z	2134	0.0163507533	0.4502880759024
putamen_rvsn_ant_z	rt_diff_large_small_z	2143	-0.0017338906	0.9360627280707
putamen_rvsn_ant_z	cbcl_scr_syn_internal_r	2336	-0.0257950259	0.2126652870664
putamen_rvsn_ant_z	accumbens_rvsn_ant_z	2309	0.5469812194	0.0000000000000
putamen_rvsn_ant_z	caudate_rvsn_ant_z	2318	0.7826410426	0.0000000000000
mOFC_rvsn_ant_z	interview_age	2319	0.0160510408	0.4397669072494
mOFC_rvsn_ant_z	bmi	2304	0.0216957644	0.2978968648859
mOFC_rvsn_ant_z	PDS_score	2319	0.0634028628	0.0022531921038
mOFC_rvsn_ant_z	hormone_scr_ert_mean_z	2149	-0.0183280799	0.3957603146812
mOFC_rvsn_ant_z	bisbas_ss_basm_rr_z	2307	-0.0104588821	0.6156010139712
mOFC_rvsn_ant_z	rt_diff_large_neutral_z	2123	-0.0333220318	0.1248160784465
mOFC_rvsn_ant_z	rt_diff_large_small_z	2133	-0.0230900052	0.2864619206790
mOFC_rvsn_ant_z	cbcl_scr_syn_internal_r	2319	0.0359613569	0.0833837831797
mOFC_rvsn_ant_z	accumbens_rvsn_ant_z	2297	0.3868152693	0.0000000000000
mOFC_rvsn_ant_z	caudate_rvsn_ant_z	2289	0.3595373073	0.0000000000000
mOFC_rvsn_ant_z	putamen_rvsn_ant_z	2289	0.3095996407	0.0000000000000
lOFC_rvsn_ant_z	interview_age	2325	0.0381088441	0.0661772628204

x1	x2	N	corr	p
lOFC_rvsn_ant_z	bmi	2310	0.0085198805	0.6823399164385
lOFC_rvsn_ant_z	PDS_score	2325	0.0417740312	0.0440025225928
lOFC_rvsn_ant_z	hormone_scr_ert_mean_z	2156	-0.0218652632	0.3102027159567
lOFC_rvsn_ant_z	bisbas_ss_basm_rr_z	2313	-0.0051682665	0.8038031626866
lOFC_rvsn_ant_z	rt_diff_large_neutral_z	2129	-0.0172292195	0.4268654057443
lOFC_rvsn_ant_z	rt_diff_large_small_z	2138	-0.0063012083	0.7709052492471
lOFC_rvsn_ant_z	cbcl_scr_syn_internal_r	2325	0.0039783465	0.8479564299188
lOFC_rvsn_ant_z	accumbens_rvsn_ant_z	2306	0.4299308749	0.0000000000000
lOFC_rvsn_ant_z	caudate_rvsn_ant_z	2296	0.5072301227	0.0000000000000
lOFC_rvsn_ant_z	putamen_rvsn_ant_z	2297	0.4216720721	0.0000000000000
lOFC_rvsn_ant_z	mOFC_rvsn_ant_z	2304	0.7151143453	0.0000000000000
accumbens_posvsneg_feedback_z	interview_age	2327	0.0132228524	0.5237717497338
accumbens_posvsneg_feedback_z	bmi	2313	0.0056399107	0.7863145270995
accumbens_posvsneg_feedback_z	PDS_score	2327	-0.0104173602	0.6154800456234
accumbens_posvsneg_feedback_z	hormone_scr_ert_mean_z	2154	0.0302189567	0.1609139709670
accumbens_posvsneg_feedback_z	bisbas_ss_basm_rr_z	2315	-0.0140313378	0.4998164061378
accumbens_posvsneg_feedback_z	rt_diff_large_neutral_z	2131	0.0073296884	0.7352391290151
accumbens_posvsneg_feedback_z	rt_diff_large_small_z	2139	0.0101931222	0.6375252775087
accumbens_posvsneg_feedback_z	cbcl_scr_syn_internal_r	2327	0.0412759986	0.0464928709600
accumbens_posvsneg_feedback_z	accumbens_rvsn_ant_z	2302	0.0209505200	0.3150159420189
accumbens_posvsneg_feedback_z	caudate_rvsn_ant_z	2295	0.0345787993	0.0976954545175
accumbens_posvsneg_feedback_z	putamen_rvsn_ant_z	2297	0.0318434805	0.1270797234588
accumbens_posvsneg_feedback_z	mOFC_rvsn_ant_z	2285	0.0099940553	0.6330181631454
accumbens_posvsneg_feedback_z	lOFC_rvsn_ant_z	2292	-0.0132818389	0.5250717035471
caudate_posvsneg_feedback_z	interview_age	2330	0.0052009054	0.8018797734273
caudate_posvsneg_feedback_z	bmi	2315	-0.0092100990	0.6578316451361
caudate_posvsneg_feedback_z	PDS_score	2330	-0.0472592261	0.0225332537249
caudate_posvsneg_feedback_z	hormone_scr_ert_mean_z	2157	0.0200445726	0.3521152473577
caudate_posvsneg_feedback_z	bisbas_ss_basm_rr_z	2318	-0.0096998808	0.6406674607524
caudate_posvsneg_feedback_z	rt_diff_large_neutral_z	2135	0.0188454630	0.3841135721618
caudate_posvsneg_feedback_z	rt_diff_large_small_z	2143	0.0002973450	0.9890239864329
caudate_posvsneg_feedback_z	cbcl_scr_syn_internal_r	2330	0.0255790657	0.2171124596051
caudate_posvsneg_feedback_z	accumbens_rvsn_ant_z	2298	0.0311861439	0.1350359447417
caudate_posvsneg_feedback_z	caudate_rvsn_ant_z	2302	0.0556180588	0.0076049239697
caudate_posvsneg_feedback_z	putamen_rvsn_ant_z	2302	0.0392230306	0.0598916987186
caudate_posvsneg_feedback_z	mOFC_rvsn_ant_z	2285	0.0188335709	0.3681929503246
caudate_posvsneg_feedback_z	lOFC_rvsn_ant_z	2288	0.0097813068	0.6400526542767
caudate_posvsneg_feedback_z	accumbens_posvsneg_feedback_z	2301	0.6092129189	0.0000000000000
putamen_posvsneg_feedback_z	interview_age	2332	-0.0029189542	0.8879621236511
putamen_posvsneg_feedback_z	bmi	2318	0.0050620788	0.8075507084160
putamen_posvsneg_feedback_z	PDS_score	2332	-0.0273134105	0.1873280107524
putamen_posvsneg_feedback_z	hormone_scr_ert_mean_z	2160	0.0118816336	0.5810112111264
putamen_posvsneg_feedback_z	bisbas_ss_basm_rr_z	2320	-0.0342870605	0.0987224580767
putamen_posvsneg_feedback_z	rt_diff_large_neutral_z	2138	0.0195853255	0.3653840640173
putamen_posvsneg_feedback_z	rt_diff_large_small_z	2146	0.0130858878	0.5445972952283
putamen_posvsneg_feedback_z	cbcl_scr_syn_internal_r	2332	0.0219270127	0.2898584448652
putamen_posvsneg_feedback_z	accumbens_rvsn_ant_z	2304	-0.0111813044	0.5916626986092
putamen_posvsneg_feedback_z	caudate_rvsn_ant_z	2301	0.0095981849	0.6453918646512
putamen_posvsneg_feedback_z	putamen_rvsn_ant_z	2302	0.0215047995	0.3023808847128
putamen_posvsneg_feedback_z	mOFC_rvsn_ant_z	2287	-0.0143957146	0.4913900505687
putamen_posvsneg_feedback_z	lOFC_rvsn_ant_z	2292	-0.0279086391	0.1816627755390
putamen_posvsneg_feedback_z	accumbens_posvsneg_feedback_z	2309	0.5625862231	0.0000000000000

x1	x2	N	corr	p
putamen_posvsneg_feedback_z	caudate_posvsneg_feedback_z	2311	0.7797300146	0.0000000000000
mOFC_posvsneg_feedback_z	interview_age	2334	0.0053311845	0.7968535478645
mOFC_posvsneg_feedback_z	bmi	2319	-0.0112699817	0.5875141814430
mOFC_posvsneg_feedback_z	PDS_score	2334	0.0044276861	0.8307072597229
mOFC_posvsneg_feedback_z	hormone_scr_ert_mean_z	2162	0.0203649673	0.3439105699913
mOFC_posvsneg_feedback_z	bisbas_ss_basm_rr_z	2322	-0.0015915561	0.9389009611981
mOFC_posvsneg_feedback_z	rt_diff_large_neutral_z	2137	0.0010727670	0.9604709943782
mOFC_posvsneg_feedback_z	rt_diff_large_small_z	2145	-0.0034542910	0.8729679197050
mOFC_posvsneg_feedback_z	cbcl_scr_syn_internal_r	2334	0.0295396359	0.1536806237244
mOFC_posvsneg_feedback_z	accumbens_rvsn_ant_z	2304	0.0153780369	0.4606427838147
mOFC_posvsneg_feedback_z	caudate_rvsn_ant_z	2300	0.0195097035	0.3496682955520
mOFC_posvsneg_feedback_z	putamen_rvsn_ant_z	2304	0.0161231019	0.4392033447141
mOFC_posvsneg_feedback_z	mOFC_rvsn_ant_z	2302	0.0183388842	0.3791408827446
mOFC_posvsneg_feedback_z	lOFC_rvsn_ant_z	2306	-0.0076928934	0.7119605601202
mOFC_posvsneg_feedback_z	accumbens_posvsneg_feedback_z	2305	0.4402800196	0.0000000000000
mOFC_posvsneg_feedback_z	caudate_posvsneg_feedback_z	2300	0.3860265820	0.0000000000000
mOFC_posvsneg_feedback_z	putamen_posvsneg_feedback_z	2305	0.3213509909	0.0000000000000
lOFC_posvsneg_feedback_z	interview_age	2338	0.0282961379	0.1713929620548
lOFC_posvsneg_feedback_z	bmi	2323	-0.0268074640	0.1964992708168
lOFC_posvsneg_feedback_z	PDS_score	2338	0.0148812675	0.4720133809273
lOFC_posvsneg_feedback_z	hormone_scr_ert_mean_z	2168	0.0137605418	0.5219280395497
lOFC_posvsneg_feedback_z	bisbas_ss_basm_rr_z	2326	-0.0092470796	0.6557823853619
lOFC_posvsneg_feedback_z	rt_diff_large_neutral_z	2141	0.0032942319	0.8789198778842
lOFC_posvsneg_feedback_z	rt_diff_large_small_z	2149	-0.0123779633	0.5663081156874
lOFC_posvsneg_feedback_z	cbcl_scr_syn_internal_r	2338	0.0116667581	0.5728638840750
lOFC_posvsneg_feedback_z	accumbens_rvsn_ant_z	2307	-0.0152841539	0.4630938924487
lOFC_posvsneg_feedback_z	caudate_rvsn_ant_z	2304	-0.0119742601	0.5656476491477
lOFC_posvsneg_feedback_z	putamen_rvsn_ant_z	2309	0.0034720765	0.8675663136525
lOFC_posvsneg_feedback_z	mOFC_rvsn_ant_z	2302	0.0072655096	0.7275335495555
lOFC_posvsneg_feedback_z	lOFC_rvsn_ant_z	2310	-0.0413774872	0.0467587431664
lOFC_posvsneg_feedback_z	accumbens_posvsneg_feedback_z	2307	0.4515023753	0.0000000000000
lOFC_posvsneg_feedback_z	caudate_posvsneg_feedback_z	2302	0.4887195222	0.0000000000000
lOFC_posvsneg_feedback_z	putamen_posvsneg_feedback_z	2307	0.4047435782	0.0000000000000
lOFC_posvsneg_feedback_z	mOFC_posvsneg_feedback_z	2327	0.7383967899	0.0000000000000